Message

From: Barnett, Cheryl [Barnett.Cheryl@epa.gov]
Sent: 2/9/2022 10:33:53 PM
To: Rosnell, Christian [Rosnell.Christian@epa.gov]
CC: Leathers, James [Leathers.James@epa.gov]; Chen, Justin [Chen.Justin@epa.gov]
Subject: FW: Sasol – CBI Substantiation Process Extension Request – Confidential Settlement Communication

Christian – this is a new case where EPA just did the inspection. Normally, I wouldn't assign an atty but since they are now communicating through counsel, we should have an attorney on it.
Justin – can you update Christian on this matter, share docs with him, and let's have Christian respond to their attorney.

Thanks,
Cheryl

From: Evynn M. Overton <EOverton@bdlaw.com>
Sent: Wednesday, February 9, 2022 3:50 PM
To: Leger, Allyson (MA) <Mary.Idlett@us.sasol.com>; Chen, Justin <Chen.Justin@epa.gov>
Cc: Potgieter, Pieter (PP) <Pieter.Potgieter@us.sasol.com>; Barnett, Cheryl <Barnett.Cheryl@epa.gov>
Subject: RE: Sasol – CBI Substantiation Process Extension Request – Confidential Settlement Communication

Thank you, Allyson, and good afternoon Justin –

I am outside counsel working with Sasol on this process. The extension to March 18, 2022 is to complete and submit to EPA the substantiation documentation. Is this timing acceptable?

As Allyson stated, she plans to upload the remaining documents to EPA's system by February 16, 2022, as previously planned. Are there any special instructions for uploading documents being claimed as CBI?

Thank you,
Evynn

Evynn M. Overton
Principal

BEVERIDGE & DIAMOND PC
O +1.410.230.1335 ~ M +1.410.961.0527 ~ EOverton@bdlaw.com

From: Leger, Allyson (MA) <Mary.Idlett@us.sasol.com>
Sent: Wednesday, February 9, 2022 3:08 PM
To: Chen, Justin <Chen.Justin@epa.gov>
Cc: Potgieter, Pieter (PP) <Pieter.Potgieter@us.sasol.com>; Barnett, Cheryl <Barnett.Cheryl@epa.gov>; Evynn M. Overton <EOverton@bdlaw.com>
Subject: RE: Sasol – CBI Substantiation Process Extension Request – Confidential Settlement Communication

Mr. Chen,

Additional response copying in Sasol's legal representation incase clarity is needed

Thanks,

Allyson Leger

Environmental Manager
Office: 337-494-5087
Mobile: 337-936-2347

From: Leger, Allyson (MA)
Sent: Wednesday, February 9, 2022 1:05 PM
To: Chen, Justin <Chen.Justin@epa.gov>
Cc: Potgieter, Pieter (PP) <Pieter.Potgieter@us.sasol.com>; Barnett, Cheryl <Barnett.Cheryl@epa.gov>
Subject: RE: Sasol – CBI Substantiation Process Extension Request – Confidential Settlement Communication

Mr. Chen,

Just to clarify, should I still expect to have the requested documents uploaded by February 16th, as we discussed? Is it just the substantiation documentation which will be submitted by Friday March 18th?

Sasol response : Correct....all previously requested documents will be uploaded to the one drive prior to Feb 16th. The extension will be for additional requested documentation (if any).

Thank you,

Allyson Leger
Environmental Manager
Office: 337-494-5087
Mobile: 337-936-2347

From: Chen, Justin <Chen.Justin@epa.gov>
Sent: Wednesday, February 9, 2022 10:28 AM
To: Leger, Allyson (MA) <Mary.Idlett@us.sasol.com>
Cc: Potgieter, Pieter (PP) <Pieter.Potgieter@us.sasol.com>; Barnett, Cheryl <Barnett.Cheryl@epa.gov>
Subject: RE: Sasol – CBI Substantiation Process Extension Request – Confidential Settlement Communication

Hi Allyson,

Thank you for reaching out. I have CC'd EPA Region 6 Regional Counsel Cheryl Barnett to this email so that she is alerted to this CBI substantiation extension request. I have also attached the signed CBI confidentiality notice that was signed during last week's inspection.

Just to clarify, should I still expect to have the requested documents uploaded by February 16th, as we discussed? Is it just the substantiation documentation which will be submitted by Friday March 18th?

Best regards,

Justin Chen

From: Leger, Allyson (MA) <Mary.Idlett@us.sasol.com>
Sent: Wednesday, February 9, 2022 10:07 AM
To: Chen, Justin <Chen.Justin@epa.gov>
Cc: Potgieter, Pieter (PP) <Pieter.Potgieter@us.sasol.com>
Subject: Sasol – CBI Substantiation Process Extension Request – Confidential Settlement Communication
Importance: High

Justin,

Sasol is writing about EPA's request for substantiation of Confidential Business Information surrounding some of the documents provided to EPA during the inspection last week, and some documents that will be produced to you next week. Sasol notes that you request substantiation "by the 15th working day after … receipt of this notice," but that Sasol may also request an extension within that time-period.

Sasol is hereby requesting an extension of thirty (30) days from the date remaining documents are due to be sent to EPA, on Wednesday, February 16. That would provide Sasol with **an extension until Friday, March 18, 2022**.

Please let me know as soon as possible if this is acceptable.

Sasol Chemicals (USA) LLC
2201 Old Spanish Trail
Westlake, LA 70669
www.sasolnorthamerica.com

Mary Allyson Leger
Environmental Manager

Tel. +1 337 494 5067
Mobile: +1 337 936 2347
E-mail: mary.idlett@us.sasol.com

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Message

From: Leathers, James [Leathers.James@epa.gov]
Sent: 2/9/2022 10:58:07 PM
To: Chen, Justin [Chen.Justin@epa.gov]
CC: Barnett, Cheryl [Barnett.Cheryl@epa.gov]; Thompson, Steve [thompson.steve@epa.gov]; Rosnell, Christian [Rosnell.Christian@epa.gov]
Subject: RE: Sasol – CBI Substantiation Process Extension Request – Confidential Settlement Communication

I also agree with the requested CBI substantiation.

James Leathers
Environmental Engineer
EPA Region 6
Chief, Air Toxics Enforcement Section
Dallas, TX 75270
(214) 665-6569
leathers.james@epa.gov

From: Barnett, Cheryl <Barnett.Cheryl@epa.gov>
Sent: Wednesday, February 09, 2022 1:03 PM
To: Chen, Justin <Chen.Justin@epa.gov>; Leathers, James <Leathers.James@epa.gov>; Thompson, Steve <thompson.steve@epa.gov>
Subject: RE: Sasol – CBI Substantiation Process Extension Request – Confidential Settlement Communication

I agree. Thanks, Justin.

Cheryl

From: Chen, Justin <Chen.Justin@epa.gov>
Sent: Wednesday, February 9, 2022 10:38 AM
To: Barnett, Cheryl <Barnett.Cheryl@epa.gov>; Leathers, James <Leathers.James@epa.gov>; Thompson, Steve <thompson.steve@epa.gov>
Subject: RE: Sasol – CBI Substantiation Process Extension Request – Confidential Settlement Communication

Will do. I requested clarification, but I believe the extension is just for the CBI substantiation and not the requested documents/data, which would still be due by the date I asked for, which is Feb 16th. I personally have no problem with an extension for the CBI substantiation.

Best regards,

Justin Chen

From: Barnett, Cheryl <Barnett.Cheryl@epa.gov>
Sent: Wednesday, February 9, 2022 10:36 AM
To: Leathers, James <Leathers.James@epa.gov>; Thompson, Steve <thompson.steve@epa.gov>

Cc: Chen, Justin <Chen.Justin@epa.gov>
Subject: FW: Sasol – CBI Substantiation Process Extension Request – Confidential Settlement Communication

Do you all have concerns with the requested extension? Justin – be sure to loop James L into these communications also.

Thanks!

From: Chen, Justin <Chen.Justin@epa.gov>
Sent: Wednesday, February 9, 2022 10:28 AM
To: Leger, Allyson (MA) <Mary.Idlett@us.sasol.com>
Cc: Potgieter, Pieter (PP) <Pieter.Potgieter@us.sasol.com>; Barnett, Cheryl <Barnett.Cheryl@epa.gov>
Subject: RE: Sasol – CBI Substantiation Process Extension Request – Confidential Settlement Communication

Hi Allyson,

Thank you for reaching out. I have CC'd EPA Region 6 Regional Counsel Cheryl Barnett to this email so that she is alerted to this CBI substantiation extension request. I have also attached the signed CBI confidentiality notice that was signed during last week's inspection.

Just to clarify, should I still expect to have the requested documents uploaded by February 16th, as we discussed? Is it just the substantiation documentation which will be submitted by Friday March 18th?

Best regards,

Justin Chen

From: Leger, Allyson (MA) <Mary.Idlett@us.sasol.com>
Sent: Wednesday, February 9, 2022 10:07 AM
To: Chen, Justin <Chen.Justin@epa.gov>
Cc: Potgieter, Pieter (PP) <Pieter.Potgieter@us.sasol.com>
Subject: Sasol – CBI Substantiation Process Extension Request – Confidential Settlement Communication
Importance: High

Justin,

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Please let me know as soon as possible if this is acceptable.

Sasol Chemicals (USA) LLC

Mary Allyson Leger
Environmental Manager

Tel. +1 337 494 5087
Mobile: +1 337 936 2347

2201 Old Spanish Trail
Westlake, LA 70669
www.sasolnorthamerica.com

E-mail: mary.idlett@us.sasol.com

Environmental awareness starts with each of us – think before you print this page

Message

From: Chen, Justin [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=695AEF04576247D8B25E78652793595F-CHEN, JUSTI]
Sent: 2/10/2022 2:07:23 PM
To: Rosnell, Christian [Rosnell.Christian@epa.gov]
Subject: FW: Sasol – CBI Substantiation Process Extension Request – Confidential Settlement Communication

As I stated, below is the email from Sasol's outside counsel.

Best regards,

Justin Chen

From: Evynn M. Overton <EOverton@bdlaw.com>
Sent: Wednesday, February 9, 2022 3:50 PM
To: Leger, Allyson (MA) <Mary.Idlett@us.sasol.com>; Chen, Justin <Chen.Justin@epa.gov>
Cc: Potgieter, Pieter (PP) <Pieter.Potgieter@us.sasol.com>; Barnett, Cheryl <Barnett.Cheryl@epa.gov>
Subject: RE: Sasol – CBI Substantiation Process Extension Request – Confidential Settlement Communication

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Thank you,
Evynn

Evynn M. Overton
Principal

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Cc: Potgieter, Pieter (PP) <Pieter.Potgieter@us.sasol.com>; Barnett, Cheryl <Barnett.Cheryl@epa.gov>; Evynn M. Overton <EOverton@bdlaw.com>
Subject: RE: Sasol – CBI Substantiation Process Extension Request – Confidential Settlement Communication

Mr. Chen,

Additional response copying in Sasol's legal representation incase clarity is needed

Thanks,

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Office: 337-494-5087
Mobile: 337-936-2347

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Sent: Wednesday, February 9, 2022 1:05 PM
To: Chen, Justin <Chen.Justin@epa.gov>
Cc: Potgieter, Pieter (PP) <Pieter.Potgieter@us.sasol.com>; Barnett, Cheryl <Barnett.Cheryl@epa.gov>
Subject: RE: Sasol – CBI Substantiation Process Extension Request – Confidential Settlement Communication

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Sasol response : Correct....all previously requested documents will be uploaded to the one drive prior to Feb 16th. The extension will be for additional requested documentation (if any).

Thank you,

Allyson Leger
Environmental Manager
Office: 337-494-5087
Mobile: 337-936-2347

From: Chen, Justin <Chen.Justin@epa.gov>
Sent: Wednesday, February 9, 2022 10:28 AM
To: Leger, Allyson (MA) <Mary.Idlett@us.sasol.com>
Cc: Potgieter, Pieter (PP) <Pieter.Potgieter@us.sasol.com>; Barnett, Cheryl <Barnett.Cheryl@epa.gov>
Subject: RE: Sasol – CBI Substantiation Process Extension Request – Confidential Settlement Communication

Hi Allyson,

Thank you for reaching out. I have CC'd EPA Region 6 Regional Counsel Cheryl Barnett to this email so that she is alerted to this CBI substantiation extension request. I have also attached the signed CBI confidentiality notice that was signed during last week's inspection.

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Best regards,

Justin Chen

From: Leger, Allyson (MA) <Mary.Idlett@us.sasol.com>
Sent: Wednesday, February 9, 2022 10:07 AM
To: Chen, Justin <Chen.Justin@epa.gov>
Cc: Potgieter, Pieter (PP) <Pieter.Potgieter@us.sasol.com>
Subject: Sasol – CBI Substantiation Process Extension Request – Confidential Settlement Communication
Importance: High

Justin,

Sasol is writing about EPA's request for substantiation of Confidential Business Information surrounding some of the documents provided to EPA during the inspection last week, and some documents that will be produced to you next week. Sasol notes that you request substantiation "by the 15th working day after … receipt of this notice," but that Sasol may also request an extension within that time-period.

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Sasol Chemicals (USA) LLC
2201 Old Spanish Trail
Westlake, LA 70669
www.sasolnorthamerica.com

Mary Allyson Leger
Environmental Manager

Tel. +1 337 494 5067
Mobile: +1 337 936 2347
E-mail: mary.idlett@us.sasol.com

Environmental awareness starts with each of us – think before you print this page

Message

From: Leathers, James [Leathers.James@epa.gov]
Sent: 5/27/2022 2:35:18 PM
To: Donaldson, Benjamin [Donaldson.Benjamin@epa.gov]; Rosenthal, Benjamin [Rosenthal.Benjamin@epa.gov]
CC: Haynes, James [haynes.james@epa.gov]; Frey, Sarah [frey.sarah@epa.gov]
Subject: RE: PAT project-Sasol Report
Attachments: Sasol Inspection peer review Complete JL.pdf; InspRptAirSasolChemicalsLLCLakeCharlesChemicalComplex20220412 Donaldson and JL comments.docx

Ben Donaldson, Good Job on the comments and Peer Review.

Ben Rosenthal, I added some additional comments and have signed off on the peer review. Please let me know if you have any questions or concerns addressing my comments.

Adding Sarah for consistency.

James Leathers
Environmental Engineer
EPA Region 6
Chief, Air Toxics Enforcement Section
Dallas, TX 75270
(214) 665-6569
leathers.james@epa.gov

From: Donaldson, Benjamin <Donaldson.Benjamin@epa.gov>
Sent: Tuesday, May 24, 2022 10:21 AM
To: Rosenthal, Benjamin <Rosenthal.Benjamin@epa.gov>; Leathers, James <Leathers.James@epa.gov>
Cc: Haynes, James <haynes.james@epa.gov>
Subject: RE: PAT project-Sasol Report

I added the following two comments:

1. I wasn't sure if the highlighted portion was meant to be highlighted in the submitted version.
2. The inspection report template says to list the facility's hours of operation.

From: Rosenthal, Benjamin <Rosenthal.Benjamin@epa.gov>
Sent: Wednesday, May 18, 2022 1:30 PM
To: Leathers, James <Leathers.James@epa.gov>; Donaldson, Benjamin <Donaldson.Benjamin@epa.gov>
Cc: Haynes, James <haynes.james@epa.gov>
Subject: PAT project-Sasol Report

Hi James and Ben,

As discussed, please see the inspection report and appendices for Sasol Lake Charles Chemical Complex attached. I will concurrently enter these documents into erouting.

Let me know if you have any questions.

Ben Rosenthal
Physical Scientist
U.S. Environmental Protection Agency, Region 6
Air Toxics Enforcement Section
1201 Elm Street, Suite 500 (MC: ECDAT)
Dallas, Texas 75270
214-665-6453

Message

From: McDowell, Justin [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=26229204C87742FCA47BF006F349DAFD-MCDOWELL, J]
Sent: 2/14/2022 9:36:06 PM
To: Lundelius, Diana [Lundelius.Diana@epa.gov]
Subject: Request for EJ Screen assistance for Sasol USA LLC
Attachments: RMP Report - 1000078599.pdf

If you could help me when you get the chance, no rush.

Justin McDowell

Environmental Life Scientist
U.S. Environmental Protection Agency
Region 6 (MC: ECDAC)
1201 Elm Street, Suite 500
Dallas, Texas 75270-2102

(214) 665-6557 (desk) (214) 665-3177 (fax)
McDowell.Justin@epa.gov

Section 1. Registration Information

Source Identification

Facility Name:	Sasol Chemicals USA LLC
Parent Company #1 Name:	
Parent Company #2 Name:	

Submission and Acceptance

Submission Type:	Re-submission
Subsequent RMP Submission Reason:	Regulated substance present above TQ in new (or previously not covered) process (40 CFR 68.190(b)(4))
Description:	
Receipt Date:	21-Oct-2019
Postmark Date:	21-Oct-2019
Next Due Date:	21-Oct-2024
Completeness Check Date:	11-Jan-2021
Complete RMP:	Yes
De-Registration / Closed Reason:	
De-Registration / Closed Reason Other Text:	
De-Registered / Closed Date:	
De-Registered / Closed Effective Date:	
Certification Received:	Yes

Facility Identification

EPA Facility Identifier:	1000 0009 9886
Other EPA Systems Facility ID:	LAR000041087
Facility Registry System ID:	

Dun and Bradstreet Numbers (DUNS)

Facility DUNS:	102663713
Parent Company #1 DUNS:	102666872
Parent Company #2 DUNS:	

Facility Location Address

Street 1:	2201 Old Spanish Trail
Street 2:	
City:	Westlake
State:	LOUISIANA
ZIP:	70669
ZIP4:	0727
County:	CALCASIEU

Facility Latitude and Longitude

Latitude (decimal):	30.250556
Longitude (decimal):	-093.281111
Lat/Long Method:	Interpolation - Photo
Lat/Long Description:	Center of Facility
Horizontal Accuracy Measure:	25

Horizontal Reference Datum Name:	North American Datum of 1983
Source Map Scale Number:	24000

Owner or Operator

Operator Name:	Sasol Chemicals USA LLC
Operator Phone:	(337) 494-5450

Mailing Address

Operator Street 1:	2201 Old Spanish Trail
Operator Street 2:	
Operator City:	Westlake
Operator State:	LOUISIANA
Operator ZIP:	70669
Operator ZIP4:	0727
Operator Foreign State or Province:	
Operator Foreign ZIP:	
Operator Foreign Country:	

Name and title of person or position responsible for Part 68 (RMP) Implementation

RMP Name of Person:	Pieter Potgieter
RMP Title of Person or Position:	Vice President SHE and ERM
RMP E-mail Address:	Pieter.potgieter@us.sasol.com

Emergency Contact

Emergency Contact Name:	Scott Tyler
Emergency Contact Title:	Senior Manager Safety and Security
Emergency Contact Phone:	(337) 310-8409
Emergency Contact 24-Hour Phone:	(337) 494-5450
Emergency Contact Ext. or PIN:	
Emergency Contact E-mail Address:	scott.tyler@us.sasol.com

Other Points of Contact

Facility or Parent Company E-mail Address:	pieter.potgieter@us.sasol.com
Facility Public Contact Phone:	(713) 882-4444
Facility or Parent Company WWW Homepage Address:	www.sasolnorthamerica.com

Local Emergency Planning Committee

LEPC:	Calcasieu Parish LEPC

Full Time Equivalent Employees

Number of Full Time Employees (FTE) on Site:	1258
FTE Claimed as CBI:	

Covered By

OSHA PSM :	Yes

EPCRA 302 :	Yes
CAA Title V:	Yes
Air Operating Permit ID:	3271

OSHA Ranking

OSHA Star or Merit Ranking:

Last Safety Inspection

Last Safety Inspection (By an External Agency) Date:	18-Mar-2014
Last Safety Inspection Performed By an External Agency:	LDEQ

Predictive Filing

Did this RMP involve predictive filing?:

Preparer Information

Preparer Name:	Michael McCarble
Preparer Phone:	(337) 494-5170
Preparer Street 1:	2201 Old Spanish Trail
Preparer Street 2:	
Preparer City:	Westlake
Preparer State:	LOUISIANA
Preparer ZIP:	70669
Preparer ZIP4:	0727
Preparer Foreign State:	
Preparer Foreign Country:	
Preparer Foreign ZIP:	

Confidential Business Information (CBI)

CBI Claimed:
Substantiation Provided:
Unsanitized RMP Provided:

Reportable Accidents

Reportable Accidents: See Section 6. Accident History below to determine if there were any accidentsreported for this RMP.

Process Chemicals

Process ID:	1000098019
Description:	Linear Alkyl Benzene Unit
Process Chemical ID:	1000122976
Program Level:	Program Level 3 process
Chemical Name:	Chlorine
CAS Number:	7782-50-5
Quantity (lbs):	4000
CBI Claimed:	
Flammable/Toxic:	Toxic

Process ID:	1000098021
Description:	Ethylene Unit (007)
Process Chemical ID:	1000122986
Program Level:	Program Level 3 process
Chemical Name:	Chlorine
CAS Number:	7782-50-5
Quantity (lbs):	24000
CBI Claimed:	
Flammable/Toxic:	Toxic

Process ID:	1000098025
Description:	Utilities Infrastructure
Process Chemical ID:	1000123005
Program Level:	Program Level 3 process
Chemical Name:	1,3-Butadiene
CAS Number:	106-99-0
Quantity (lbs):	4675284
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098026
Description:	LLDPE 1 (060)
Process Chemical ID:	1000123010
Program Level:	Program Level 3 process
Chemical Name:	Isopentane [Butane, 2-methyl-]
CAS Number:	78-78-4
Quantity (lbs):	68808
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098027
Description:	Ethylene II Unit 050
Process Chemical ID:	1000123015
Program Level:	Program Level 3 process
Chemical Name:	Methane
CAS Number:	74-82-8
Quantity (lbs):	108388
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098028
Description:	Ethylene Oxide Unit 20
Process Chemical ID:	1000123019
Program Level:	Program Level 3 process

Chemical Name:	Ethylene [Ethene]
CAS Number:	74-85-1
Quantity (lbs):	45155
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000100654
Description:	LDPE (063)
Process Chemical ID:	1000126037
Program Level:	Program Level 3 process
Chemical Name:	Propylene [1-Propene]
CAS Number:	115-07-1
Quantity (lbs):	22748
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098021
Description:	Ethylene Unit (007)
Process Chemical ID:	1000122978
Program Level:	Program Level 3 process
Chemical Name:	1,3-Butadiene
CAS Number:	106-99-0
Quantity (lbs):	601253
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098021
Description:	Ethylene Unit (007)
Process Chemical ID:	1000122980
Program Level:	Program Level 3 process
Chemical Name:	Ethane
CAS Number:	74-84-0
Quantity (lbs):	251497
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098023
Description:	Alcohol Units
Process Chemical ID:	1000122988
Program Level:	Program Level 3 process
Chemical Name:	Ethylene [Ethene]
CAS Number:	74-85-1
Quantity (lbs):	33440
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098024
Description:	CoMonomers (012)
Process Chemical ID:	1000122991
Program Level:	Program Level 3 process
Chemical Name:	Ethylene [Ethene]
CAS Number:	74-85-1
Quantity (lbs):	260690
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098025
Description:	Utilities Infrastructure
Process Chemical ID:	1000122997
Program Level:	Program Level 3 process
Chemical Name:	2-Butene-cis
CAS Number:	590-18-1
Quantity (lbs):	29249
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098026
Description:	LLDPE 1 (060)
Process Chemical ID:	1000123009
Program Level:	Program Level 3 process
Chemical Name:	Ethylene [Ethene]
CAS Number:	74-85-1
Quantity (lbs):	128968
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098027
Description:	Ethylene II Unit 050
Process Chemical ID:	1000123011
Program Level:	Program Level 3 process
Chemical Name:	Propylene [1-Propene]
CAS Number:	115-07-1
Quantity (lbs):	503594
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098027
Description:	Ethylene II Unit 050
Process Chemical ID:	1000123012
Program Level:	Program Level 3 process
Chemical Name:	1,3-Butadiene
CAS Number:	106-99-0
Quantity (lbs):	25842

CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098027
Description:	Ethylene II Unit 050
Process Chemical ID:	1000123014
Program Level:	Program Level 3 process
Chemical Name:	Ethylene [Ethene]
CAS Number:	74-85-1
Quantity (lbs):	1268098
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000100654
Description:	LDPE (063)
Process Chemical ID:	1000126036
Program Level:	Program Level 3 process
Chemical Name:	Ethylene [Ethene]
CAS Number:	74-85-1
Quantity (lbs):	72912
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098021
Description:	Ethylene Unit (007)
Process Chemical ID:	1000122982
Program Level:	Program Level 3 process
Chemical Name:	Ethylene [Ethene]
CAS Number:	74-85-1
Quantity (lbs):	271086
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098024
Description:	CoMonomers (012)
Process Chemical ID:	1000122990
Program Level:	Program Level 3 process
Chemical Name:	Propylene [1-Propene]
CAS Number:	115-07-1
Quantity (lbs):	140368
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098025
Description:	Utilities Infrastructure

Process Chemical ID:	1000122993
Program Level:	Program Level 3 process
Chemical Name:	2-Butene-trans [2-Butene, (E)]
CAS Number:	624-64-6
Quantity (lbs):	42165
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098025
Description:	Utilities Infrastructure
Process Chemical ID:	1000123007
Program Level:	Program Level 3 process
Chemical Name:	1-Pentene
CAS Number:	109-67-1
Quantity (lbs):	195600
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098026
Description:	LLDPE 1 (060)
Process Chemical ID:	1000123008
Program Level:	Program Level 3 process
Chemical Name:	Dimethyldichlorosilane [Silane, dichlorodimethyl-]
CAS Number:	75-78-5
Quantity (lbs):	13791
CBI Claimed:	
Flammable/Toxic:	Toxic

Process ID:	1000098028
Description:	Ethylene Oxide Unit 20
Process Chemical ID:	1000123021
Program Level:	Program Level 3 process
Chemical Name:	Propylene [1-Propene]
CAS Number:	115-07-1
Quantity (lbs):	10222
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098021
Description:	Ethylene Unit (007)
Process Chemical ID:	1000122981
Program Level:	Program Level 3 process
Chemical Name:	Butene
CAS Number:	25167-67-3
Quantity (lbs):	120100
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098021
Description:	Ethylene Unit (007)
Process Chemical ID:	1000122985
Program Level:	Program Level 3 process
Chemical Name:	Propane
CAS Number:	74-98-6
Quantity (lbs):	52761
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098025
Description:	Utilities Infrastructure
Process Chemical ID:	1000122995
Program Level:	Program Level 3 process
Chemical Name:	Propadiene [1,2-Propadiene]
CAS Number:	463-49-0
Quantity (lbs):	34217
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098025
Description:	Utilities Infrastructure
Process Chemical ID:	1000122999
Program Level:	Program Level 3 process
Chemical Name:	Chlorine
CAS Number:	7782-50-5
Quantity (lbs):	27470
CBI Claimed:	
Flammable/Toxic:	Toxic

Process ID:	1000098019
Description:	Linear Alkyl Benzene Unit
Process Chemical ID:	1000122975
Program Level:	Program Level 3 process
Chemical Name:	Hydrogen fluoride/Hydrofluoric acid (conc 50% or greater) [Hydrofluoric acid]
CAS Number:	7664-39-3
Quantity (lbs):	396260
CBI Claimed:	
Flammable/Toxic:	Toxic

Process ID:	1000098020
Description:	Ethoxylation Units
Process Chemical ID:	1000122977
Program Level:	Program Level 3 process
Chemical Name:	Ethylene oxide [Oxirane]

CAS Number:	75-21-8
Quantity (lbs):	6299667
CBI Claimed:	
Flammable/Toxic:	Toxic

Process ID:	1000098021
Description:	Ethylene Unit (007)
Process Chemical ID:	1000122983
Program Level:	Program Level 3 process
Chemical Name:	Butane
CAS Number:	106-97-8
Quantity (lbs):	81229
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098021
Description:	Ethylene Unit (007)
Process Chemical ID:	1000122984
Program Level:	Program Level 3 process
Chemical Name:	Methane
CAS Number:	74-82-8
Quantity (lbs):	11958
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098025
Description:	Utilities Infrastructure
Process Chemical ID:	1000123000
Program Level:	Program Level 3 process
Chemical Name:	Propane
CAS Number:	74-98-6
Quantity (lbs):	1186796
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098025
Description:	Utilities Infrastructure
Process Chemical ID:	1000123001
Program Level:	Program Level 3 process
Chemical Name:	Ethylene [Ethene]
CAS Number:	74-85-1
Quantity (lbs):	276941
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098025
Description:	Utilities Infrastructure
Process Chemical ID:	1000123004
Program Level:	Program Level 3 process
Chemical Name:	Propylene [1-Propene]
CAS Number:	115-07-1
Quantity (lbs):	5209207
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098028
Description:	Ethylene Oxide Unit 20
Process Chemical ID:	1000123020
Program Level:	Program Level 3 process
Chemical Name:	Ethylene oxide [Oxirane]
CAS Number:	75-21-8
Quantity (lbs):	3104648
CBI Claimed:	
Flammable/Toxic:	Toxic

Process ID:	1000098021
Description:	Ethylene Unit (007)
Process Chemical ID:	1000122979
Program Level:	Program Level 3 process
Chemical Name:	Propylene [1-Propene]
CAS Number:	115-07-1
Quantity (lbs):	799056
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098025
Description:	Utilities Infrastructure
Process Chemical ID:	1000122996
Program Level:	Program Level 3 process
Chemical Name:	1-Butene
CAS Number:	106-98-9
Quantity (lbs):	208101
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098025
Description:	Utilities Infrastructure
Process Chemical ID:	1000122998
Program Level:	Program Level 3 process
Chemical Name:	1,3-Pentadiene
CAS Number:	504-60-9
Quantity (lbs):	408014
CBI Claimed:	

Flammable/Toxic:	Flammable

Process ID:	1000098025
Description:	Utilities Infrastructure
Process Chemical ID:	1000123002
Program Level:	Program Level 3 process
Chemical Name:	Ethane
CAS Number:	74-84-0
Quantity (lbs):	331629
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098027
Description:	Ethylene II Unit 050
Process Chemical ID:	1000123017
Program Level:	Program Level 3 process
Chemical Name:	Hydrogen
CAS Number:	1333-74-0
Quantity (lbs):	16710
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098023
Description:	Alcohol Units
Process Chemical ID:	1000122989
Program Level:	Program Level 3 process
Chemical Name:	Pentane
CAS Number:	109-66-0
Quantity (lbs):	59153
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098025
Description:	Utilities Infrastructure
Process Chemical ID:	1000122992
Program Level:	Program Level 3 process
Chemical Name:	Methane
CAS Number:	74-82-8
Quantity (lbs):	26706
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098025
Description:	Utilities Infrastructure
Process Chemical ID:	1000123006

Program Level:	Program Level 3 process
Chemical Name:	Butane
CAS Number:	106-97-8
Quantity (lbs):	897526
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098027
Description:	Ethylene II Unit 050
Process Chemical ID:	1000123016
Program Level:	Program Level 3 process
Chemical Name:	Propane
CAS Number:	74-98-6
Quantity (lbs):	34487
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098028
Description:	Ethylene Oxide Unit 20
Process Chemical ID:	1000123018
Program Level:	Program Level 3 process
Chemical Name:	Methane
CAS Number:	74-82-8
Quantity (lbs):	43286
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098022
Description:	Normal Paraffin Ext (016)
Process Chemical ID:	1000122987
Program Level:	Program Level 3 process
Chemical Name:	Pentane
CAS Number:	109-66-0
Quantity (lbs):	1019961
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098025
Description:	Utilities Infrastructure
Process Chemical ID:	1000122994
Program Level:	Program Level 3 process
Chemical Name:	Propyne [1-Propyne]
CAS Number:	74-99-7
Quantity (lbs):	28088
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098025
Description:	Utilities Infrastructure
Process Chemical ID:	1000123003
Program Level:	Program Level 3 process
Chemical Name:	Isopentane [Butane, 2-methyl-]
CAS Number:	78-78-4
Quantity (lbs):	190922
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000098027
Description:	Ethylene II Unit 050
Process Chemical ID:	1000123013
Program Level:	Program Level 3 process
Chemical Name:	Ethane
CAS Number:	74-84-0
Quantity (lbs):	1152180
CBI Claimed:	
Flammable/Toxic:	Flammable

Process NAICS

Process ID:	1000098019
Process NAICS ID:	1000099262
Program Level:	Program Level 3 process
NAICS Code:	32511
NAICS Description:	Petrochemical Manufacturing

Process ID:	1000098020
Process NAICS ID:	1000099263
Program Level:	Program Level 3 process
NAICS Code:	32511
NAICS Description:	Petrochemical Manufacturing

Process ID:	1000098021
Process NAICS ID:	1000099264
Program Level:	Program Level 3 process
NAICS Code:	32511
NAICS Description:	Petrochemical Manufacturing

Process ID:	1000098022
Process NAICS ID:	1000099265
Program Level:	Program Level 3 process
NAICS Code:	32511
NAICS Description:	Petrochemical Manufacturing

Process ID:	1000098023

Process NAICS ID:	1000099266
Program Level:	Program Level 3 process
NAICS Code:	32511
NAICS Description:	Petrochemical Manufacturing

Process ID:	1000098024
Process NAICS ID:	1000099267
Program Level:	Program Level 3 process
NAICS Code:	32511
NAICS Description:	Petrochemical Manufacturing

Process ID:	1000098025
Process NAICS ID:	1000099268
Program Level:	Program Level 3 process
NAICS Code:	32511
NAICS Description:	Petrochemical Manufacturing

Process ID:	1000098026
Process NAICS ID:	1000099269
Program Level:	Program Level 3 process
NAICS Code:	32619
NAICS Description:	Other Plastics Product Manufacturing

Process ID:	1000098027
Process NAICS ID:	1000099270
Program Level:	Program Level 3 process
NAICS Code:	32511
NAICS Description:	Petrochemical Manufacturing

Process ID:	1000098028
Process NAICS ID:	1000099271
Program Level:	Program Level 3 process
NAICS Code:	32511
NAICS Description:	Petrochemical Manufacturing

Process ID:	1000100654
Process NAICS ID:	1000101899
Program Level:	Program Level 3 process
NAICS Code:	32619
NAICS Description:	Other Plastics Product Manufacturing

Section 2. Toxics: Worst Case

Toxic Worst ID: 1000078513

Percent Weight:	99.5
Physical State:	Liquid
Model Used:	EPA's RMP*Comp(TM)
Release Duration (mins):	10
Wind Speed (m/sec):	1.5
Atmospheric Stability Class:	F
Topography:	Urban

Passive Mitigation Considered

Dikes:	Yes
Enclosures:	
Berms:	
Drains:	Yes
Sumps:	
Other Type:	water curtain

Toxic Worst ID: 1000078514

Percent Weight:	99.9
Physical State:	Gas liquified by refrigeration
Model Used:	EPA's RMP*Comp(TM)
Release Duration (mins):	10
Wind Speed (m/sec):	1.5
Atmospheric Stability Class:	F
Topography:	Urban

Passive Mitigation Considered

Dikes:	Yes
Enclosures:	
Berms:	Yes
Drains:	
Sumps:	Yes
Other Type:	

Section 3. Toxics: Alternative Release

Toxic Alter ID: 1000083706

Percent Weight:	100.0
Physical State:	Gas
Model Used:	EPA's RMP*Comp(TM)
Wind Speed (m/sec):	3.0
Atmospheric Stability Class:	D
Topography:	Urban

Passive Mitigation Considered

Dikes:	Yes
Enclosures:	
Berms:	
Drains:	Yes
Sumps:	
Other Type:	

Active Mitigation Considered

Sprinkler System:	Yes
Deluge System:	Yes
Water Curtain:	Yes
Neutralization:	Yes
Excess Flow Valve:	
Flares:	
Scrubbers:	
Emergency Shutdown:	Yes
Other Type:	

Toxic Alter ID: 1000083707

Percent Weight:	100.0
Physical State:	Gas
Model Used:	EPA's RMP*Comp(TM)
Wind Speed (m/sec):	3.0
Atmospheric Stability Class:	D
Topography:	Urban

Passive Mitigation Considered

Dikes:	
Enclosures:	
Berms:	
Drains:	
Sumps:	
Other Type:	

Active Mitigation Considered

Sprinkler System:	
Deluge System:	
Water Curtain:	
Neutralization:	
Excess Flow Valve:	
Flares:	
Scrubbers:	

Emergency Shutdown:	
Other Type:	Fire Monitors

Toxic Alter ID: 1000083708

Percent Weight:	100.0
Physical State:	Liquid
Model Used:	PHAST Dispersion Modeling
Wind Speed (m/sec):	3.8
Atmospheric Stability Class:	D
Topography:	Urban

Passive Mitigation Considered

Dikes:	
Enclosures:	
Berms:	
Drains:	
Sumps:	
Other Type:	

Active Mitigation Considered

Sprinkler System:	
Deluge System:	Yes
Water Curtain:	
Neutralization:	
Excess Flow Valve:	
Flares:	
Scrubbers:	
Emergency Shutdown:	Yes
Other Type:	

Toxic Alter ID: 1000083709

Percent Weight:	100.0
Physical State:	Gas
Model Used:	EPA's RMP*Comp(TM)
Wind Speed (m/sec):	3.0
Atmospheric Stability Class:	D
Topography:	Urban

Passive Mitigation Considered

Dikes:	
Enclosures:	
Berms:	
Drains:	Yes
Sumps:	
Other Type:	

Active Mitigation Considered

Sprinkler System:	
Deluge System:	
Water Curtain:	
Neutralization:	
Excess Flow Valve:	
Flares:	

Scrubbers:	
Emergency Shutdown:	
Other Type:	Fire Monitors

Toxic Alter ID: 1000083710

Percent Weight:	100.0
Physical State:	Gas
Model Used:	EPA's RMP*Comp(TM)
Wind Speed (m/sec):	3.0
Atmospheric Stability Class:	D
Topography:	Urban

Passive Mitigation Considered

Dikes:	
Enclosures:	
Berms:	
Drains:	Yes
Sumps:	
Other Type:	

Active Mitigation Considered

Sprinkler System:	
Deluge System:	
Water Curtain:	
Neutralization:	
Excess Flow Valve:	
Flares:	
Scrubbers:	
Emergency Shutdown:	
Other Type:	fire monitors

Toxic Alter ID: 1000083711

Percent Weight:	14.0
Physical State:	Liquid
Model Used:	EPA's RMP*Comp(TM)
Wind Speed (m/sec):	3.0
Atmospheric Stability Class:	D
Topography:	Urban

Passive Mitigation Considered

Dikes:	Yes
Enclosures:	Yes
Berms:	
Drains:	
Sumps:	
Other Type:	

Active Mitigation Considered

Sprinkler System:	Yes
Deluge System:	
Water Curtain:	Yes
Neutralization:	
Excess Flow Valve:	

Flares:	Yes
Scrubbers:	
Emergency Shutdown:	Yes
Other Type:	

Toxic Alter ID: 1000083712

Percent Weight:	100.0
Physical State:	Gas liquified by refrigeration
Model Used:	EPA's RMP*Comp(TM)
Wind Speed (m/sec):	3.0
Atmospheric Stability Class:	D
Topography:	Urban

Passive Mitigation Considered

Dikes:	Yes
Enclosures:	
Berms:	
Drains:	
Sumps:	Yes
Other Type:	

Active Mitigation Considered

Sprinkler System:	Yes
Deluge System:	
Water Curtain:	
Neutralization:	
Excess Flow Valve:	
Flares:	
Scrubbers:	
Emergency Shutdown:	
Other Type:	

Section 4. Flammables: Worst Case

Flammable Worst ID: 1000058866

Model Used: EPA's OCA Guidance Reference Tables or Equations
Endpoint used: 1 PSI

Passive Mitigation Considered

Blast Walls:
Other Type:

Flammable Worst ID: 1000058867

Model Used: EPA's RMP*Comp(TM)
Endpoint used: 1 PSI

Passive Mitigation Considered

Blast Walls:
Other Type:

Flammable Worst ID: 1000058868

Model Used: EPA's RMP*Comp(TM)
Endpoint used: 1 PSI

Passive Mitigation Considered

Blast Walls:
Other Type:

Flammable Worst ID: 1000058869

Model Used: EPA's RMP*Comp(TM)
Endpoint used: 1 PSI

Passive Mitigation Considered

Blast Walls:
Other Type:

Flammable Worst ID: 1000058870

Model Used: EPA's RMP*Comp(TM)
Endpoint used: 1 PSI

Passive Mitigation Considered

Blast Walls:
Other Type:

Section 5. Flammables: Alternative Release

Flammable Alter ID: 1000055340

Model Used:	EPA's RMP*Comp(TM)

Passive Mitigation Considered

Dikes:	
Fire Walls:	
Blast Walls:	
Enclosures:	
Other Type:	

Active Mitigation Considered

Sprinkler System:	
Deluge System:	Yes
Water Curtain:	
Excess Flow Valve:	
Other Type:	

Section 6. Accident History

Accident History ID: 1000067759

Date of Accident:	13-Jan-2020
Time Accident Began (HHMM):	1323
NAICS Code of Process Involved:	32619
NAICS Description:	Other Plastics Product Manufacturing
Release Duration:	000 Hours 17 Minutes

Release Event

Gas Release:	Yes
Liquid Spill/Evaporation:	
Fire:	Yes
Explosion:	
Uncontrolled/Runaway Reaction:	

Release Source

Storage Vessel:	
Piping:	Yes
Process Vessel:	
Transfer Hose:	
Valve:	
Pump:	
Joint:	
Other Release Source:	

Weather Conditions at the Time of Event

Wind Speed:	
Units:	
Direction:	SW
Temperature:	75
Atmospheric Stability Class:	D
Precipitation Present:	
Unknown Weather Conditions:	

On-Site Impacts

Employee or Contractor Deaths:	0
Public Responder Deaths:	0
Public Deaths:	0
Employee or Contractor Injuries:	2
Public Responder Injuries:	0
Public Injuries:	0
On-Site Property Damage ($):	1000000

Known Off-Site Impacts

Deaths:	0
Hospitalization:	0
Other Medical Treatments:	0
Evacuated:	0

Sheltered-in-Place:	0
Off-Site Property Damage ($):	54000

Environmental Damage

Fish or Animal Kills:	
Tree, Lawn, Shrub, or Crop Damage:	
Water Contamination:	
Soil Contamination:	
Other Environmental Damage:	

Initiating Event

Initiating Event:	Equipment Failure

Contributing Factors

Equipment Failure:	Yes
Human Error:	
Improper Procedures:	
Overpressurization:	
Upset Condition:	
By-Pass Condition:	
Maintenance Activity/Inactivity:	
Process Design Failure:	Yes
Unsuitable Equipment:	
Unusual Weather Condition:	
Management Error:	
Other Contributing Factor:	

Off-Site Responders Notified

Off-Site Responders Notified:	Notified Only

Changes Introduced as a Result of the Accident

Improved or Upgraded Equipment:	Yes
Revised Maintenance:	
Revised Training:	
Revised Operating Procedures:	
New Process Controls:	
New Mitigation Systems:	
Revised Emergency Response Plan:	
Changed Process:	
Reduced Inventory:	
None:	
Other Changes Introduced:	

Confidential Business Information

CBI Claimed:	

Chemicals in Accident History

Accident Chemical ID:	1000054595
Quantity Released (lbs):	12481
Percent Weight:	
Chemical Name:	Ethylene [Ethene]
CAS Number:	74-85-1
Flammable/Toxic:	Flammable

Accident History ID: 1000064797

Date of Accident:	06-Jul-2019
Time Accident Began (HHMM):	1910
NAICS Code of Process Involved:	326199
NAICS Description:	All Other Plastics Product Manufacturing
Release Duration:	000 Hours 01 Minutes

Release Event

Gas Release:	
Liquid Spill/Evaporation:	
Fire:	Yes
Explosion:	
Uncontrolled/Runaway Reaction:	

Release Source

Storage Vessel:	
Piping:	Yes
Process Vessel:	
Transfer Hose:	
Valve:	
Pump:	
Joint:	
Other Release Source:	

Weather Conditions at the Time of Event

Wind Speed:	1.5
Units:	miles/h
Direction:	S
Temperature:	90
Atmospheric Stability Class:	B
Precipitation Present:	
Unknown Weather Conditions:	

On-Site Impacts

Employee or Contractor Deaths:	0
Public Responder Deaths:	0
Public Deaths:	0
Employee or Contractor Injuries:	1
Public Responder Injuries:	0
Public Injuries:	0
On-Site Property Damage ($):	0

Known Off-Site Impacts

Deaths:	0
Hospitalization:	0
Other Medical Treatments:	0
Evacuated:	0
Sheltered-in-Place:	0
Off-Site Property Damage ($):	0

Environmental Damage

Fish or Animal Kills:	
Tree, Lawn, Shrub, or Crop Damage:	
Water Contamination:	
Soil Contamination:	
Other Environmental Damage:	

Initiating Event

Initiating Event:	Human Error

Contributing Factors

Equipment Failure:	
Human Error:	Yes
Improper Procedures:	
Overpressurization:	
Upset Condition:	
By-Pass Condition:	
Maintenance Activity/Inactivity:	
Process Design Failure:	Yes
Unsuitable Equipment:	
Unusual Weather Condition:	
Management Error:	
Other Contributing Factor:	

Off-Site Responders Notified

Off-Site Responders Notified:	State police

Changes Introduced as a Result of the Accident

Improved or Upgraded Equipment:	
Revised Maintenance:	
Revised Training:	Yes
Revised Operating Procedures:	Yes
New Process Controls:	
New Mitigation Systems:	Yes
Revised Emergency Response Plan:	
Changed Process:	
Reduced Inventory:	
None:	
Other Changes Introduced:	

Confidential Business Information

CBI Claimed:

Chemicals in Accident History

Accident Chemical ID:	1000052394
Quantity Released (lbs):	1
Percent Weight:	
Chemical Name:	Ethylene [Ethene]
CAS Number:	74-85-1
Flammable/Toxic:	Flammable

Section 7. Program Level 3

Description

LAB Sasol Chemicals USA LLC has a long standing commitment to worker and public safety. This commitment is demonstrated by the resources invested in accident prevention, training of qualified personnel, and considering safety in the design, installation, operation and maintenance of our process. Our process includes eleven (11) interconnecting units. Alcohol, Normal Paraffin, Ethylene, CoMonomers, Linear Alky Benzene, Ethoxylation, Linear Low Density Polyethylene, Low Density Polyethylene, Ethane Cracker, Ethylene Oxide and a Utilities Infrastructure (UO&I) All elements within the prevention program apply to each unit. Each unit is equipped with active mitigation within the prevention program apply to each unit. Each unit is equipped with active mitigation designed to assure a safe work place for our employees and surrounding neighbors. A more detailed description of our Prevention Program can be found in the executive summary

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000103573
Chemical Name:	Hydrogen fluoride/Hydrofluoric acid (conc 50% or greater) [Hydrofluoric acid]
Flammable/Toxic:	Toxic
CAS Number:	7664-39-3
Process ID:	1000098019
Description:	Linear Alkyl Benzene Unit
Prevention Program Level 3 ID:	1000083164
NAICS Code:	32511
Prevention Program Chemical ID:	1000103574
Chemical Name:	Chlorine
Flammable/Toxic:	Toxic
CAS Number:	7782-50-5
Process ID:	1000098019
Description:	Linear Alkyl Benzene Unit
Prevention Program Level 3 ID:	1000083164
NAICS Code:	32511

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	05-Jul-2017

Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	28-Mar-2018

The Technique Used

What If:	
Checklist:	
What If/Checklist:	Yes

HAZOP:	
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	
Other Technique Used:	
PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	27-Mar-2020

Major Hazards Identified

Toxic Release:	Yes
Fire:	Yes
Explosion:	
Runaway Reaction:	
Polymerization:	
Overpressurization:	Yes
Corrosion:	Yes
Overfilling:	
Contamination:	
Equipment Failure:	Yes
Loss of Cooling, Heating, Electricity, Instrument Air:	Yes
Earthquake:	
Floods (Flood Plain):	
Tornado:	Yes
Hurricanes:	Yes
Other Major Hazard Identified:	

Process Controls in Use

Vents:	Yes
Relief Valves:	Yes
Check Valves:	Yes
Scrubbers:	Yes
Flares:	Yes
Manual Shutoffs:	Yes
Automatic Shutoffs:	Yes
Interlocks:	Yes
Alarms and Procedures:	Yes
Keyed Bypass:	Yes
Emergency Air Supply:	Yes
Emergency Power:	Yes
Backup Pump:	Yes
Grounding Equipment:	Yes
Inhibitor Addition:	
Rupture Disks:	Yes
Excess Flow Device:	Yes
Quench System:	
Purge System:	Yes
None:	
Other Process Control in Use:	

Mitigation Systems in Use

Sprinkler System:	Yes
Dikes:	Yes
Fire Walls:	

Blast Walls:	Yes
Deluge System:	Yes
Water Curtain:	Yes
Enclosure:	
Neutralization:	Yes
None:	
Other Mitigation System in Use:	

Monitoring/Detection Systems in Use

Process Area Detectors:	Yes
Perimeter Monitors:	Yes
None:	
Other Monitoring/Detection System in Use:	

Changes Since Last PHA Update

Reduction in Chemical Inventory:	
Increase in Chemical Inventory:	
Change Process Parameters:	Yes
Installation of Process Controls:	
Installation of Process Detection Systems:	
Installation of Perimeter Monitoring Systems:	Yes
Installation of Mitigation Systems:	
None Recommended:	
None:	
Other Changes Since Last PHA or PHA Update:	

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):	20-Jun-2019

Training

Training Revision Date (The date of the most recent review or revision of training programs):	13-Apr-2017

The Type of Training Provided

Classroom:	Yes
On the Job:	Yes
Other Training:	Computer Based Training

The Type of Competency Testing Used

Written Tests:	Yes
Oral Tests:	Yes
Demonstration:	
Observation:	Yes
Other Type of Competency Testing Used:	

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures):	15-Mar-2018
Equipment Inspection Date (The date of the most recent equipment inspection or test):	27-Dec-2018
Equipment Tested (Equipment most recently inspected or tested):	S64-408

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures):	31-Jan-2019
Change Management Revision Date (The date of the most recent review or revision of management of change procedures):	21-May-2018

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review):	13-Feb-2019

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit):	18-Mar-2019
Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit):	30-Jun-2021

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)):	28-Mar-2018
Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation):	28-Mar-2018

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans):	23-Feb-2016

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures):	12-Jun-2017

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures):	31-Oct-2016
Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance):	12-Dec-2017

Confidential Business Information

CBI Claimed:

Description

ETO Sasol Chemicals USA LLC has a long standing commitment to worker and public safety. This commitment is demonstrated by the resources invested in accident prevention, training of qualified personnel, and considering safety in the design, installation, operation and maintenance of our process. Our process includes eleven (11) interconnecting units. Alcohol, Normal Paraffin, Ethylene, CoMonomers, Linear Alky Benzene, Ethoxylation, Linear Low Density Polyethylene, Low Density Polyethylene, Ethane Cracker, Ethylene Oxide and a Utilities Infrastructure (UO&I) All elements within the prevention program apply to each unit. Each unit is equipped with active mitigation within the prevention program apply to each unit. Each unit is equipped with active mitigation designed to assure a safe work place for our employees and surrounding neighbors. A more detailed description of our Prevention Program can be found in the executive summary

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000103575
Chemical Name:	Ethylene oxide [Oxirane]
Flammable/Toxic:	Toxic
CAS Number:	75-21-8
Process ID:	1000098020
Description:	Ethoxylation Units
Prevention Program Level 3 ID:	1000083165
NAICS Code:	32511

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	05-Feb-2018

Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	02-May-2016

The Technique Used

What If:	
Checklist:	
What If/Checklist:	Yes
HAZOP:	
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	
Other Technique Used:	
PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	19-Nov-2019

Major Hazards Identified

Toxic Release:	Yes
Fire:	Yes
Explosion:	Yes
Runaway Reaction:	Yes
Polymerization:	Yes

Overpressurization:	Yes
Corrosion:	Yes
Overfilling:	Yes
Contamination:	Yes
Equipment Failure:	Yes
Loss of Cooling, Heating, Electricity, Instrument Air:	Yes
Earthquake:	
Floods (Flood Plain):	
Tornado:	Yes
Hurricanes:	Yes
Other Major Hazard Identified:	

Process Controls in Use

Vents:	Yes
Relief Valves:	Yes
Check Valves:	Yes
Scrubbers:	Yes
Flares:	Yes
Manual Shutoffs:	Yes
Automatic Shutoffs:	Yes
Interlocks:	Yes
Alarms and Procedures:	Yes
Keyed Bypass:	
Emergency Air Supply:	Yes
Emergency Power:	Yes
Backup Pump:	Yes
Grounding Equipment:	Yes
Inhibitor Addition:	
Rupture Disks:	Yes
Excess Flow Device:	
Quench System:	
Purge System:	Yes
None:	
Other Process Control in Use:	

Mitigation Systems in Use

Sprinkler System:	Yes
Dikes:	Yes
Fire Walls:	Yes
Blast Walls:	Yes
Deluge System:	Yes
Water Curtain:	
Enclosure:	
Neutralization:	
None:	
Other Mitigation System in Use:	

Monitoring/Detection Systems in Use

Process Area Detectors:	Yes
Perimeter Monitors:	Yes
None:	
Other Monitoring/Detection System in Use:	

Changes Since Last PHA Update

Reduction in Chemical Inventory:	
Increase in Chemical Inventory:	
Change Process Parameters:	
Installation of Process Controls:	Yes
Installation of Process Detection Systems:	
Installation of Perimeter Monitoring Systems:	
Installation of Mitigation Systems:	
None Recommended:	
None:	
Other Changes Since Last PHA or PHA Update:	

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):	05-Jun-2019

Training

Training Revision Date (The date of the most recent review or revision of training programs):	13-Apr-2017

The Type of Training Provided

Classroom:	Yes
On the Job:	Yes
Other Training:	Computer Based Training

The Type of Competency Testing Used

Written Tests:	Yes
Oral Tests:	Yes
Demonstration:	Yes
Observation:	Yes
Other Type of Competency Testing Used:	

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures):	17-Oct-2017
Equipment Inspection Date (The date of the most recent equipment inspection or test):	03-Dec-2018
Equipment Tested (Equipment most recently inspected or tested):	V6-724

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures):	14-Feb-2019
Change Management Revision Date (The date of the most recent review or revision of management of change procedures):	21-May-2018

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review):	14-Feb-2019

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit):	18-Mar-2019
Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit):	30-Jun-2021

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)):	08-May-2018
Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation):	31-Dec-2018

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans):	23-Feb-2016

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures):	12-Jun-2017

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures):	31-Oct-2016
Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance):	12-Dec-2017

Confidential Business Information

CBI Claimed:	

Description

Ethy1 Sasol Chemicals USA LLC has a long standing commitment to worker and public safety. This commitment is demonstrated by the resources invested in accident prevention, training of qualified personnel, and considering safety in the design, installation, operation and maintenance of our process. Our process includes eleven (11) interconnecting units. Alcohol, Normal Paraffin, Ethylene, CoMonomers, Linear Alky Benzene, Ethoxylation, Linear Low Density Polyethylene, Low Density Polyethylene, Ethane Cracker, Ethylene Oxide and a Utilities Infrastructure (UO&I) All elements within the prevention program apply to each unit. Each unit is equipped with active mitigation within the prevention program apply to each unit. Each unit is equipped with active mitigation designed to assure a safe work place for our employees and surrounding neighbors. A more detailed description of our Prevention Program can be found in the executive summary

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000103577
Chemical Name:	Propylene [1-Propene]
Flammable/Toxic:	Flammable
CAS Number:	115-07-1
Process ID:	1000098021
Description:	Ethylene Unit (007)
Prevention Program Level 3 ID:	1000083166
NAICS Code:	32511
Prevention Program Chemical ID:	1000103576
Chemical Name:	1,3-Butadiene
Flammable/Toxic:	Flammable
CAS Number:	106-99-0
Process ID:	1000098021
Description:	Ethylene Unit (007)
Prevention Program Level 3 ID:	1000083166
NAICS Code:	32511
Prevention Program Chemical ID:	1000103582
Chemical Name:	Methane
Flammable/Toxic:	Flammable
CAS Number:	74-82-8
Process ID:	1000098021
Description:	Ethylene Unit (007)
Prevention Program Level 3 ID:	1000083166
NAICS Code:	32511
Prevention Program Chemical ID:	1000103579
Chemical Name:	Butene
Flammable/Toxic:	Flammable
CAS Number:	25167-67-3

Process ID:	1000098021
Description:	Ethylene Unit (007)
Prevention Program Level 3 ID:	1000083166
NAICS Code:	32511

Prevention Program Chemical ID:	1000103581
Chemical Name:	Butane
Flammable/Toxic:	Flammable
CAS Number:	106-97-8

Process ID:	1000098021
Description:	Ethylene Unit (007)
Prevention Program Level 3 ID:	1000083166
NAICS Code:	32511

Prevention Program Chemical ID:	1000103578
Chemical Name:	Ethane
Flammable/Toxic:	Flammable
CAS Number:	74-84-0

Process ID:	1000098021
Description:	Ethylene Unit (007)
Prevention Program Level 3 ID:	1000083166
NAICS Code:	32511

Prevention Program Chemical ID:	1000103583
Chemical Name:	Propane
Flammable/Toxic:	Flammable
CAS Number:	74-98-6

Process ID:	1000098021
Description:	Ethylene Unit (007)
Prevention Program Level 3 ID:	1000083166
NAICS Code:	32511

Prevention Program Chemical ID:	1000103584
Chemical Name:	Chlorine
Flammable/Toxic:	Toxic
CAS Number:	7782-50-5

Process ID:	1000098021
Description:	Ethylene Unit (007)
Prevention Program Level 3 ID:	1000083166
NAICS Code:	32511

Prevention Program Chemical ID:	1000103580
Chemical Name:	Ethylene [Ethene]
Flammable/Toxic:	Flammable
CAS Number:	74-85-1

Process ID:	1000098021
Description:	Ethylene Unit (007)
Prevention Program Level 3 ID:	1000083166
NAICS Code:	32511

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	23-Aug-2019

Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	01-May-2018

The Technique Used

What If:	
Checklist:	
What If/Checklist:	Yes
HAZOP:	
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	
Other Technique Used:	
PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	30-Jun-2020

Major Hazards Identified

Toxic Release:	Yes
Fire:	Yes
Explosion:	Yes
Runaway Reaction:	Yes
Polymerization:	
Overpressurization:	Yes
Corrosion:	Yes
Overfilling:	Yes
Contamination:	Yes
Equipment Failure:	Yes
Loss of Cooling, Heating, Electricity, Instrument Air:	Yes
Earthquake:	
Floods (Flood Plain):	
Tornado:	Yes
Hurricanes:	
Other Major Hazard Identified:	

Process Controls in Use

Vents:	Yes
Relief Valves:	Yes
Check Valves:	Yes
Scrubbers:	Yes
Flares:	Yes
Manual Shutoffs:	Yes
Automatic Shutoffs:	Yes
Interlocks:	Yes
Alarms and Procedures:	Yes
Keyed Bypass:	Yes
Emergency Air Supply:	Yes
Emergency Power:	Yes
Backup Pump:	Yes
Grounding Equipment:	Yes
Inhibitor Addition:	
Rupture Disks:	Yes
Excess Flow Device:	Yes
Quench System:	Yes
Purge System:	Yes
None:	
Other Process Control in Use:	

Mitigation Systems in Use

Sprinkler System:	Yes
Dikes:	Yes
Fire Walls:	Yes
Blast Walls:	Yes
Deluge System:	Yes
Water Curtain:	Yes
Enclosure:	
Neutralization:	Yes
None:	
Other Mitigation System in Use:	

Monitoring/Detection Systems in Use

Process Area Detectors:	Yes
Perimeter Monitors:	Yes
None:	
Other Monitoring/Detection System in Use:	

Changes Since Last PHA Update

Reduction in Chemical Inventory:	
Increase in Chemical Inventory:	
Change Process Parameters:	Yes
Installation of Process Controls:	
Installation of Process Detection Systems:	
Installation of Perimeter Monitoring Systems:	
Installation of Mitigation Systems:	
None Recommended:	
None:	
Other Changes Since Last PHA or PHA Update:	

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):	23-Aug-2019

Training

Training Revision Date (The date of the most recent review or revision of training programs):	13-Apr-2017

The Type of Training Provided

Classroom:	Yes
On the Job:	Yes
Other Training:	Computer Based Training

The Type of Competency Testing Used

Written Tests:	Yes
Oral Tests:	Yes
Demonstration:	Yes
Observation:	
Other Type of Competency Testing Used:	

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures):	20-Jun-2019
Equipment Inspection Date (The date of the most recent equipment inspection or test):	06-Feb-0019
Equipment Tested (Equipment most recently inspected or tested):	V7-742

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures):	11-Feb-2019
Change Management Revision Date (The date of the most recent review or revision of management of change procedures):	21-May-2018

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review):	06-Feb-2019

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit):	18-Mar-2019
Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit):	30-Jun-2021

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)):	11-Apr-2018
Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation):	31-May-2018

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans):	23-Feb-2016

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures):	12-Jun-2017

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures):	31-Oct-2016
Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance):	12-Dec-2017

Confidential Business Information

CBI Claimed:

Description

NPU Sasol Chemicals USA LLC has a long standing commitment to worker and public safety. This commitment is demonstrated by the resources invested in accident prevention, training of qualified personnel, and considering safety in the design, installation, operation and maintenance of our process. Our process includes eleven (11) interconnecting units. Alcohol, Normal Paraffin, Ethylene, CoMonomers, Linear Alky Benzene, Ethoxylation, Linear Low Density Polyethylene, Low Density Polyethylene, Ethane Cracker, Ethylene Oxide and a Utilities Infrastructure (UO&I) All elements within the prevention program apply to each unit. Each unit is equipped with active mitigation within the prevention program apply to each unit. Each unit is equipped with active mitigation designed to assure a safe work place for our employees and surrounding neighbors. A more detailed description of our Prevention Program can be found in the executive summary

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000103585
Chemical Name:	Pentane
Flammable/Toxic:	Flammable
CAS Number:	109-66-0
Process ID:	1000098022
Description:	Normal Paraffin Ext (016)
Prevention Program Level 3 ID:	1000083167
NAICS Code:	32511

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	29-Sep-2017

Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	31-Jan-2018

The Technique Used

What If:	
Checklist:	
What If/Checklist:	Yes
HAZOP:	
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	
Other Technique Used:	
PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	19-Nov-2019

Major Hazards Identified

Toxic Release:	Yes
Fire:	Yes
Explosion:	Yes
Runaway Reaction:	Yes
Polymerization:	

Overpressurization:	Yes
Corrosion:	Yes
Overfilling:	Yes
Contamination:	Yes
Equipment Failure:	Yes
Loss of Cooling, Heating, Electricity, Instrument Air:	Yes
Earthquake:	
Floods (Flood Plain):	
Tornado:	Yes
Hurricanes:	Yes
Other Major Hazard Identified:	

Process Controls in Use

Vents:	Yes
Relief Valves:	Yes
Check Valves:	Yes
Scrubbers:	
Flares:	Yes
Manual Shutoffs:	Yes
Automatic Shutoffs:	Yes
Interlocks:	Yes
Alarms and Procedures:	Yes
Keyed Bypass:	Yes
Emergency Air Supply:	Yes
Emergency Power:	Yes
Backup Pump:	Yes
Grounding Equipment:	Yes
Inhibitor Addition:	
Rupture Disks:	Yes
Excess Flow Device:	Yes
Quench System:	
Purge System:	Yes
None:	
Other Process Control in Use:	

Mitigation Systems in Use

Sprinkler System:	Yes
Dikes:	Yes
Fire Walls:	
Blast Walls:	
Deluge System:	Yes
Water Curtain:	
Enclosure:	
Neutralization:	
None:	
Other Mitigation System in Use:	

Monitoring/Detection Systems in Use

Process Area Detectors:	Yes
Perimeter Monitors:	Yes
None:	
Other Monitoring/Detection System in Use:	

Changes Since Last PHA Update

Reduction in Chemical Inventory:	
Increase in Chemical Inventory:	
Change Process Parameters:	Yes
Installation of Process Controls:	
Installation of Process Detection Systems:	
Installation of Perimeter Monitoring Systems:	
Installation of Mitigation Systems:	
None Recommended:	
None:	
Other Changes Since Last PHA or PHA Update:	

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):	05-Jun-2019

Training

Training Revision Date (The date of the most recent review or revision of training programs):	13-Apr-2017

The Type of Training Provided

Classroom:	Yes
On the Job:	Yes
Other Training:	Computer Based Training

The Type of Competency Testing Used

Written Tests:	Yes
Oral Tests:	Yes
Demonstration:	Yes
Observation:	
Other Type of Competency Testing Used:	

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures):	05-Jan-2016
Equipment Inspection Date (The date of the most recent equipment inspection or test):	05-Dec-2018
Equipment Tested (Equipment most recently inspected or tested):	V16-13

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures):	25-Jan-2019
Change Management Revision Date (The date of the most recent review or revision of management of change procedures):	21-May-2018

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review):	31-Jan-2019

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit):	18-Mar-2019
Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit):	30-Jun-2021

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)):	14-Sep-2017
Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation):	31-Jan-2018

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans):	23-Feb-2016

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures):	12-Jun-2017

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures):	31-Oct-2016
Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance):	12-Dec-2017

Confidential Business Information

CBI Claimed:	

Description

Alc Sasol Chemicals USA LLC has a long standing commitment to worker and public safety. This commitment is demonstrated by the resources invested in accident prevention, training of qualified personnel, and considering safety in the design, installation, operation and maintenance of our process. Our process includes eleven (11) interconnecting units. Alcohol, Normal Paraffin, Ethylene, CoMonomers, Linear Alky Benzene, Ethoxylation, Linear Low Density Polyethylene, Low Density Polyethylene, Ethane Cracker, Ethylene Oxide and a Utilities Infrastructure (UO&I) All elements within the prevention program apply to each unit. Each unit is equipped with active mitigation within the prevention program apply to each unit. Each unit is equipped with active mitigation designed to assure a safe work place for our employees and surrounding neighbors. A more detailed description of our Prevention Program can be found in the executive summary

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000103586
Chemical Name:	Ethylene [Ethene]
Flammable/Toxic:	Flammable
CAS Number:	74-85-1
Process ID:	1000098023
Description:	Alcohol Units
Prevention Program Level 3 ID:	1000083168
NAICS Code:	32511
Prevention Program Chemical ID:	1000103587
Chemical Name:	Pentane
Flammable/Toxic:	Flammable
CAS Number:	109-66-0
Process ID:	1000098023
Description:	Alcohol Units
Prevention Program Level 3 ID:	1000083168
NAICS Code:	32511

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	30-Jun-2017

Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	23-May-2018

The Technique Used

What If:	
Checklist:	
What If/Checklist:	Yes
HAZOP:	
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	

Other Technique Used:	
PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	30-Jun-2021

Major Hazards Identified

Toxic Release:	Yes
Fire:	Yes
Explosion:	Yes
Runaway Reaction:	Yes
Polymerization:	
Overpressurization:	Yes
Corrosion:	Yes
Overfilling:	Yes
Contamination:	Yes
Equipment Failure:	Yes
Loss of Cooling, Heating, Electricity, Instrument Air:	Yes
Earthquake:	
Floods (Flood Plain):	
Tornado:	Yes
Hurricanes:	Yes
Other Major Hazard Identified:	

Process Controls in Use

Vents:	Yes
Relief Valves:	Yes
Check Valves:	Yes
Scrubbers:	
Flares:	Yes
Manual Shutoffs:	Yes
Automatic Shutoffs:	Yes
Interlocks:	Yes
Alarms and Procedures:	Yes
Keyed Bypass:	
Emergency Air Supply:	Yes
Emergency Power:	Yes
Backup Pump:	Yes
Grounding Equipment:	Yes
Inhibitor Addition:	Yes
Rupture Disks:	Yes
Excess Flow Device:	Yes
Quench System:	
Purge System:	Yes
None:	
Other Process Control in Use:	

Mitigation Systems in Use

Sprinkler System:	Yes
Dikes:	Yes
Fire Walls:	Yes
Blast Walls:	Yes
Deluge System:	Yes
Water Curtain:	

Enclosure:
Neutralization:
None:
Other Mitigation System in Use:

Monitoring/Detection Systems in Use

Process Area Detectors:	Yes
Perimeter Monitors:	Yes
None:	
Other Monitoring/Detection System in Use:	

Changes Since Last PHA Update

Reduction in Chemical Inventory:	
Increase in Chemical Inventory:	
Change Process Parameters:	Yes
Installation of Process Controls:	
Installation of Process Detection Systems:	
Installation of Perimeter Monitoring Systems:	
Installation of Mitigation Systems:	
None Recommended:	
None:	
Other Changes Since Last PHA or PHA Update:	

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):	04-Jun-2019

Training

Training Revision Date (The date of the most recent review or revision of training programs):	13-Apr-2017

The Type of Training Provided

Classroom:	Yes
On the Job:	Yes
Other Training:	Computer Based Training

The Type of Competency Testing Used

Written Tests:	Yes
Oral Tests:	Yes
Demonstration:	Yes
Observation:	Yes
Other Type of Competency Testing Used:	

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures):	17-Oct-2017

Equipment Inspection Date (The date of the most recent equipment inspection or test):	04-Feb-2019
Equipment Tested (Equipment most recently inspected or tested):	V6-6275FA

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures):	04-Feb-2019
Change Management Revision Date (The date of the most recent review or revision of management of change procedures):	26-Jul-2018

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review):	04-Feb-2019

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit):	18-Mar-2019
Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit):	30-Jun-2021

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)):	06-Aug-2018
Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation):	01-Apr-2019

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans):	23-Feb-2016

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures):	12-Jun-2017

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures):	31-Oct-2016

Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance):	12-Dec-2017

Confidential Business Information

CBI Claimed:

Description

CoMon Sasol Chemicals USA LLC has a long standing commitment to worker and public safety. This commitment is demonstrated by the resources invested in accident prevention, training of qualified personnel, and considering safety in the design, installation, operation and maintenance of our process. Our process includes eleven (11) interconnecting units. Alcohol, Normal Paraffin, Ethylene, CoMonomers, Linear Alky Benzene, Ethoxylation, Linear Low Density Polyethylene, Low Density Polyethylene, Ethane Cracker, Ethylene Oxide and a Utilities Infrastructure (UO&I) All elements within the prevention program apply to each unit. Each unit is equipped with active mitigation within the prevention program apply to each unit. Each unit is equipped with active mitigation designed to assure a safe work place for our employees and surrounding neighbors. A more detailed description of our Prevention Program can be found in the executive summary

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000103588
Chemical Name:	Propylene [1-Propene]
Flammable/Toxic:	Flammable
CAS Number:	115-07-1
Process ID:	1000098024
Description:	CoMonomers (012)
Prevention Program Level 3 ID:	1000083169
NAICS Code:	32511
Prevention Program Chemical ID:	1000103589
Chemical Name:	Ethylene [Ethene]
Flammable/Toxic:	Flammable
CAS Number:	74-85-1
Process ID:	1000098024
Description:	CoMonomers (012)
Prevention Program Level 3 ID:	1000083169
NAICS Code:	32511

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	19-Apr-2018

Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	08-Feb-2016

The Technique Used

What If:	
Checklist:	
What If/Checklist:	Yes
HAZOP:	
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	

Other Technique Used:	
PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	21-Jul-2021

Major Hazards Identified

Toxic Release:	
Fire:	
Explosion:	Yes
Runaway Reaction:	
Polymerization:	
Overpressurization:	Yes
Corrosion:	Yes
Overfilling:	Yes
Contamination:	Yes
Equipment Failure:	Yes
Loss of Cooling, Heating, Electricity, Instrument Air:	Yes
Earthquake:	
Floods (Flood Plain):	
Tornado:	
Hurricanes:	
Other Major Hazard Identified:	

Process Controls in Use

Vents:	
Relief Valves:	Yes
Check Valves:	Yes
Scrubbers:	
Flares:	Yes
Manual Shutoffs:	Yes
Automatic Shutoffs:	
Interlocks:	Yes
Alarms and Procedures:	Yes
Keyed Bypass:	
Emergency Air Supply:	
Emergency Power:	
Backup Pump:	Yes
Grounding Equipment:	Yes
Inhibitor Addition:	
Rupture Disks:	Yes
Excess Flow Device:	
Quench System:	
Purge System:	
None:	
Other Process Control in Use:	

Mitigation Systems in Use

Sprinkler System:	
Dikes:	Yes
Fire Walls:	
Blast Walls:	
Deluge System:	Yes
Water Curtain:	

Enclosure:	
Neutralization:	
None:	
Other Mitigation System in Use:	

Monitoring/Detection Systems in Use

Process Area Detectors:	Yes
Perimeter Monitors:	
None:	
Other Monitoring/Detection System in Use:	

Changes Since Last PHA Update

Reduction in Chemical Inventory:	
Increase in Chemical Inventory:	
Change Process Parameters:	
Installation of Process Controls:	
Installation of Process Detection Systems:	
Installation of Perimeter Monitoring Systems:	
Installation of Mitigation Systems:	
None Recommended:	
None:	Yes
Other Changes Since Last PHA or PHA Update:	

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):	21-May-2019

Training

Training Revision Date (The date of the most recent review or revision of training programs):	13-Apr-2017

The Type of Training Provided

Classroom:	Yes
On the Job:	Yes
Other Training:	Computer Based Training

The Type of Competency Testing Used

Written Tests:	Yes
Oral Tests:	Yes
Demonstration:	Yes
Observation:	Yes
Other Type of Competency Testing Used:	

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures):	17-Oct-2017

Equipment Inspection Date (The date of the most recent equipment inspection or test):	11-Feb-2019
Equipment Tested (Equipment most recently inspected or tested):	V12-5047

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures):	21-Jan-2019
Change Management Revision Date (The date of the most recent review or revision of management of change procedures):	21-May-2018

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review):	22-Jan-2019

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit):	18-Mar-2019
Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit):	30-Jun-2021

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)):	11-May-2018
Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation):	30-Jun-2018

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans):	23-Feb-2016

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures):	12-Jun-2017

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures):	31-Oct-2016

Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance):	12-Dec-2017

Confidential Business Information

CBI Claimed:

Description

UT Sasol Chemicals USA LLC has a long standing commitment to worker and public safety. This commitment is demonstrated by the resources invested in accident prevention, training of qualified personnel, and considering safety in the design, installation, operation and maintenance of our process. Our process includes eleven (11) interconnecting units. Alcohol, Normal Paraffin, Ethylene, CoMonomers, Linear Alky Benzene, Ethoxylation, Linear Low Density Polyethylene, Low Density Polyethylene, Ethane Cracker, Ethylene Oxide and a Utilities Infrastructure (UO&I) All elements within the prevention program apply to each unit. Each unit is equipped with active mitigation within the prevention program apply to each unit. Each unit is equipped with active mitigation designed to assure a safe work place for our employees and surrounding neighbors. A more detailed description of our Prevention Program can be found in the executive summary

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000103571
Chemical Name:	Propane
Flammable/Toxic:	Flammable
CAS Number:	74-98-6
Process ID:	1000098025
Description:	Utilities Infrastructure
Prevention Program Level 3 ID:	1000083170
NAICS Code:	32511
Prevention Program Chemical ID:	1000103590
Chemical Name:	Methane
Flammable/Toxic:	Flammable
CAS Number:	74-82-8
Process ID:	1000098025
Description:	Utilities Infrastructure
Prevention Program Level 3 ID:	1000083170
NAICS Code:	32511
Prevention Program Chemical ID:	1000103591
Chemical Name:	Ethane
Flammable/Toxic:	Flammable
CAS Number:	74-84-0
Process ID:	1000098025
Description:	Utilities Infrastructure
Prevention Program Level 3 ID:	1000083170
NAICS Code:	32511
Prevention Program Chemical ID:	1000103572
Chemical Name:	Ethylene [Ethene]
Flammable/Toxic:	Flammable
CAS Number:	74-85-1

Process ID:	1000098025
Description:	Utilities Infrastructure
Prevention Program Level 3 ID:	1000083170
NAICS Code:	32511

Prevention Program Chemical ID:	1000103593
Chemical Name:	Isopentane [Butane, 2-methyl-]
Flammable/Toxic:	Flammable
CAS Number:	78-78-4

Process ID:	1000098025
Description:	Utilities Infrastructure
Prevention Program Level 3 ID:	1000083170
NAICS Code:	32511

Prevention Program Chemical ID:	1000103570
Chemical Name:	Chlorine
Flammable/Toxic:	Toxic
CAS Number:	7782-50-5

Process ID:	1000098025
Description:	Utilities Infrastructure
Prevention Program Level 3 ID:	1000083170
NAICS Code:	32511

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	21-May-2018

Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	30-Nov-2015

The Technique Used

What If:	
Checklist:	
What If/Checklist:	
HAZOP:	Yes
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	
Other Technique Used:	
PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	29-Nov-2017

Major Hazards Identified

Toxic Release:	
Fire:	Yes
Explosion:	
Runaway Reaction:	
Polymerization:	
Overpressurization:	Yes
Corrosion:	
Overfilling:	
Contamination:	
Equipment Failure:	Yes
Loss of Cooling, Heating, Electricity, Instrument Air:	Yes
Earthquake:	
Floods (Flood Plain):	
Tornado:	
Hurricanes:	Yes
Other Major Hazard Identified:	

Process Controls in Use

Vents:	Yes
Relief Valves:	Yes
Check Valves:	Yes
Scrubbers:	
Flares:	Yes
Manual Shutoffs:	Yes
Automatic Shutoffs:	Yes
Interlocks:	Yes
Alarms and Procedures:	Yes
Keyed Bypass:	
Emergency Air Supply:	
Emergency Power:	
Backup Pump:	Yes
Grounding Equipment:	Yes
Inhibitor Addition:	
Rupture Disks:	
Excess Flow Device:	
Quench System:	
Purge System:	Yes
None:	
Other Process Control in Use:	

Mitigation Systems in Use

Sprinkler System:	
Dikes:	Yes
Fire Walls:	
Blast Walls:	
Deluge System:	
Water Curtain:	
Enclosure:	
Neutralization:	
None:	
Other Mitigation System in Use:	

Monitoring/Detection Systems in Use

Process Area Detectors:	Yes
Perimeter Monitors:	Yes
None:	
Other Monitoring/Detection System in Use:	

Changes Since Last PHA Update

Reduction in Chemical Inventory:	
Increase in Chemical Inventory:	
Change Process Parameters:	
Installation of Process Controls:	Yes
Installation of Process Detection Systems:	
Installation of Perimeter Monitoring Systems:	
Installation of Mitigation Systems:	
None Recommended:	Yes
None:	
Other Changes Since Last PHA or PHA Update:	

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):	18-Jun-2019

Training

Training Revision Date (The date of the most recent review or revision of training programs):	23-Apr-2018

The Type of Training Provided

Classroom:	Yes
On the Job:	Yes
Other Training:	Computer Based Training

The Type of Competency Testing Used

Written Tests:	Yes
Oral Tests:	Yes
Demonstration:	Yes
Observation:	Yes
Other Type of Competency Testing Used:	

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures):	24-Apr-2018
Equipment Inspection Date (The date of the most recent equipment inspection or test):	18-Jan-2019

Equipment Tested (Equipment most recently inspected or tested):	PSV-05500957

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures):	17-Jan-2019
Change Management Revision Date (The date of the most recent review or revision of management of change procedures):	21-May-2018

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review):	14-Feb-2019

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit):	18-Mar-2019
Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit):	30-Jun-2021

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)):	08-May-2018
Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation):	31-May-2018

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans):	23-Feb-2016

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures):	12-Jun-2017

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures):	31-Oct-2016
Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance):	12-Dec-2017

Confidential Business Information

CBI Claimed:

Description

LLDPE Sasol Chemicals USA LLC has a long standing commitment to worker and public safety. This commitment is demonstrated by the resources invested in accident prevention, training of qualified personnel, and considering safety in the design, installation, operation and maintenance of our process. Our process includes eleven (11) interconnecting units. Alcohol, Normal Paraffin, Ethylene, CoMonomers, Linear Alky Benzene, Ethoxylation, Linear Low Density Polyethylene, Low Density Polyethylene, Ethane Cracker, Ethylene Oxide and a Utilities Infrastructure (UO&I) All elements within the prevention program apply to each unit. Each unit is equipped with active mitigation within the prevention program apply to each unit. Each unit is equipped with active mitigation designed to assure a safe work place for our employees and surrounding neighbors. A more detailed description of our Prevention Program can be found in the executive summary

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000103596
Chemical Name:	Isopentane [Butane, 2-methyl-]
Flammable/Toxic:	Flammable
CAS Number:	78-78-4
Process ID:	1000098026
Description:	LLDPE 1 (060)
Prevention Program Level 3 ID:	1000083171
NAICS Code:	32619
Prevention Program Chemical ID:	1000103594
Chemical Name:	Dimethyldichlorosilane [Silane, dichlorodimethyl-]
Flammable/Toxic:	Toxic
CAS Number:	75-78-5
Process ID:	1000098026
Description:	LLDPE 1 (060)
Prevention Program Level 3 ID:	1000083171
NAICS Code:	32619
Prevention Program Chemical ID:	1000103595
Chemical Name:	Ethylene [Ethene]
Flammable/Toxic:	Flammable
CAS Number:	74-85-1
Process ID:	1000098026
Description:	LLDPE 1 (060)
Prevention Program Level 3 ID:	1000083171
NAICS Code:	32619

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	10-Aug-2018

Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	11-Aug-2016

The Technique Used

What If:	
Checklist:	
What If/Checklist:	
HAZOP:	Yes
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	
Other Technique Used:	
PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	10-Aug-2018

Major Hazards Identified

Toxic Release:	Yes
Fire:	Yes
Explosion:	Yes
Runaway Reaction:	
Polymerization:	
Overpressurization:	Yes
Corrosion:	
Overfilling:	Yes
Contamination:	Yes
Equipment Failure:	Yes
Loss of Cooling, Heating, Electricity, Instrument Air:	Yes
Earthquake:	
Floods (Flood Plain):	
Tornado:	
Hurricanes:	Yes
Other Major Hazard Identified:	

Process Controls in Use

Vents:	Yes
Relief Valves:	Yes
Check Valves:	Yes
Scrubbers:	
Flares:	Yes
Manual Shutoffs:	Yes
Automatic Shutoffs:	Yes
Interlocks:	Yes
Alarms and Procedures:	Yes
Keyed Bypass:	Yes
Emergency Air Supply:	Yes
Emergency Power:	Yes
Backup Pump:	Yes
Grounding Equipment:	Yes
Inhibitor Addition:	Yes
Rupture Disks:	Yes
Excess Flow Device:	Yes

Quench System:	Yes
Purge System:	Yes
None:	
Other Process Control in Use:	

Mitigation Systems in Use

Sprinkler System:	Yes
Dikes:	Yes
Fire Walls:	Yes
Blast Walls:	Yes
Deluge System:	
Water Curtain:	Yes
Enclosure:	Yes
Neutralization:	
None:	
Other Mitigation System in Use:	

Monitoring/Detection Systems in Use

Process Area Detectors:	Yes
Perimeter Monitors:	Yes
None:	
Other Monitoring/Detection System in Use:	

Changes Since Last PHA Update

Reduction in Chemical Inventory:	
Increase in Chemical Inventory:	
Change Process Parameters:	
Installation of Process Controls:	
Installation of Process Detection Systems:	
Installation of Perimeter Monitoring Systems:	
Installation of Mitigation Systems:	
None Recommended:	
None:	Yes
Other Changes Since Last PHA or PHA Update:	

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):	09-Sep-2019

Training

Training Revision Date (The date of the most recent review or revision of training programs):	11-Aug-2016

The Type of Training Provided

Classroom:	Yes
On the Job:	Yes
Other Training:	Computer Based Training

The Type of Competency Testing Used

Written Tests:	Yes
Oral Tests:	Yes
Demonstration:	Yes
Observation:	Yes
Other Type of Competency Testing Used:	Computer based Training

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures):	11-Jun-2018
Equipment Inspection Date (The date of the most recent equipment inspection or test):	09-Jan-2019
Equipment Tested (Equipment most recently inspected or tested):	PSV-06062117

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures):	02-Feb-2019
Change Management Revision Date (The date of the most recent review or revision of management of change procedures):	06-Apr-2018

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review):	08-Feb-2019

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit):	18-Mar-2019
Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit):	30-Jun-2021

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)):	
Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation):	

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans):	12-Jul-2018

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures):	11-Jul-2018

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures):	31-Oct-2016
Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance):	12-Dec-2017

Confidential Business Information

CBI Claimed:

Description

ethy2 Sasol Chemicals USA LLC has a long standing commitment to worker and public safety. This commitment is demonstrated by the resources invested in accident prevention, training of qualified personnel, and considering safety in the design, installation, operation and maintenance of our process. Our process includes eleven (11) interconnecting units. Alcohol, Normal Paraffin, Ethylene, CoMonomers, Linear Alky Benzene, Ethoxylation, Linear Low Density Polyethylene, Low Density Polyethylene, Ethane Cracker, Ethylene Oxide and a Utilities Infrastructure (UO&I) All elements within the prevention program apply to each unit. Each unit is equipped with active mitigation within the prevention program apply to each unit. Each unit is equipped with active mitigation designed to assure a safe work place for our employees and surrounding neighbors. A more detailed description of our Prevention Program can be found in the executive summary

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000103600
Chemical Name:	Ethylene [Ethene]
Flammable/Toxic:	Flammable
CAS Number:	74-85-1
Process ID:	1000098027
Description:	Ethylene II Unit 050
Prevention Program Level 3 ID:	1000083172
NAICS Code:	32511
Prevention Program Chemical ID:	1000103602
Chemical Name:	Propane
Flammable/Toxic:	Flammable
CAS Number:	74-98-6
Process ID:	1000098027
Description:	Ethylene II Unit 050
Prevention Program Level 3 ID:	1000083172
NAICS Code:	32511
Prevention Program Chemical ID:	1000103603
Chemical Name:	Hydrogen
Flammable/Toxic:	Flammable
CAS Number:	1333-74-0
Process ID:	1000098027
Description:	Ethylene II Unit 050
Prevention Program Level 3 ID:	1000083172
NAICS Code:	32511
Prevention Program Chemical ID:	1000103601
Chemical Name:	Methane
Flammable/Toxic:	Flammable
CAS Number:	74-82-8

Process ID:	1000098027
Description:	Ethylene II Unit 050
Prevention Program Level 3 ID:	1000083172
NAICS Code:	32511

Prevention Program Chemical ID:	1000103598
Chemical Name:	1,3-Butadiene
Flammable/Toxic:	Flammable
CAS Number:	106-99-0

Process ID:	1000098027
Description:	Ethylene II Unit 050
Prevention Program Level 3 ID:	1000083172
NAICS Code:	32511

Prevention Program Chemical ID:	1000103597
Chemical Name:	Propylene [1-Propene]
Flammable/Toxic:	Flammable
CAS Number:	115-07-1

Process ID:	1000098027
Description:	Ethylene II Unit 050
Prevention Program Level 3 ID:	1000083172
NAICS Code:	32511

Prevention Program Chemical ID:	1000103599
Chemical Name:	Ethane
Flammable/Toxic:	Flammable
CAS Number:	74-84-0

Process ID:	1000098027
Description:	Ethylene II Unit 050
Prevention Program Level 3 ID:	1000083172
NAICS Code:	32511

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	23-Jul-2018

Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	12-Oct-2017

The Technique Used

What If:	
Checklist:	
What If/Checklist:	
HAZOP:	Yes
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	
Other Technique Used:	
PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	12-Oct-2019

Major Hazards Identified

Toxic Release:	Yes
Fire:	Yes
Explosion:	Yes
Runaway Reaction:	Yes
Polymerization:	Yes
Overpressurization:	Yes
Corrosion:	Yes
Overfilling:	Yes
Contamination:	Yes
Equipment Failure:	Yes
Loss of Cooling, Heating, Electricity, Instrument Air:	Yes
Earthquake:	Yes
Floods (Flood Plain):	Yes
Tornado:	Yes
Hurricanes:	Yes
Other Major Hazard Identified:	Brittle Fracture

Process Controls in Use

Vents:	Yes
Relief Valves:	Yes
Check Valves:	Yes
Scrubbers:	Yes
Flares:	Yes
Manual Shutoffs:	Yes
Automatic Shutoffs:	Yes
Interlocks:	Yes
Alarms and Procedures:	Yes
Keyed Bypass:	Yes
Emergency Air Supply:	Yes
Emergency Power:	Yes
Backup Pump:	Yes
Grounding Equipment:	Yes
Inhibitor Addition:	Yes
Rupture Disks:	Yes
Excess Flow Device:	Yes
Quench System:	Yes
Purge System:	Yes
None:	
Other Process Control in Use:	

Mitigation Systems in Use

Sprinkler System:	Yes
Dikes:	Yes
Fire Walls:	
Blast Walls:	Yes
Deluge System:	Yes
Water Curtain:	
Enclosure:	Yes
Neutralization:	Yes
None:	
Other Mitigation System in Use:	

Monitoring/Detection Systems in Use

Process Area Detectors:	Yes
Perimeter Monitors:	Yes
None:	
Other Monitoring/Detection System in Use:	

Changes Since Last PHA Update

Reduction in Chemical Inventory:	
Increase in Chemical Inventory:	
Change Process Parameters:	Yes
Installation of Process Controls:	Yes
Installation of Process Detection Systems:	Yes
Installation of Perimeter Monitoring Systems:	
Installation of Mitigation Systems:	Yes
None Recommended:	
None:	
Other Changes Since Last PHA or PHA Update:	

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):	15-Apr-2020

Training

Training Revision Date (The date of the most recent review or revision of training programs):	01-Oct-2017

The Type of Training Provided

Classroom:	Yes
On the Job:	Yes
Other Training:	Computer Based Training

The Type of Competency Testing Used

Written Tests:	Yes
Oral Tests:	Yes
Demonstration:	
Observation:	Yes

Other Type of Competency Testing Used:	Operator training simulator

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures):	05-Apr-2018
Equipment Inspection Date (The date of the most recent equipment inspection or test):	03-Dec-2018
Equipment Tested (Equipment most recently inspected or tested):	PSV-05030073

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures):	18-Oct-2017
Change Management Revision Date (The date of the most recent review or revision of management of change procedures):	21-May-2018

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review):	

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit):	18-Mar-2019
Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit):	04-Apr-2020

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)):	
Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation):	

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans):	09-Apr-2014

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures):	05-Jun-2015

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures):	16-Jul-2015
Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance):	29-Oct-2015

Confidential Business Information

CBI Claimed:

Description

eo/eg Sasol Chemicals USA LLC has a long standing commitment to worker and public safety. This commitment is demonstrated by the resources invested in accident prevention, training of qualified personnel, and considering safety in the design, installation, operation and maintenance of our process. Our process includes eleven (11) interconnecting units. Alcohol, Normal Paraffin, Ethylene, CoMonomers, Linear Alky Benzene, Ethoxylation, Linear Low Density Polyethylene, Low Density Polyethylene, Ethane Cracker, Ethylene Oxide and a Utilities Infrastructure (UO&I) All elements within the prevention program apply to each unit. Each unit is equipped with active mitigation within the prevention program apply to each unit. Each unit is equipped with active mitigation designed to assure a safe work place for our employees and surrounding neighbors. A more detailed description of our Prevention Program can be found in the executive summary

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000103605
Chemical Name:	Ethylene [Ethene]
Flammable/Toxic:	Flammable
CAS Number:	74-85-1
Process ID:	1000098028
Description:	Ethylene Oxide Unit 20
Prevention Program Level 3 ID:	1000083173
NAICS Code:	32511
Prevention Program Chemical ID:	1000103592
Chemical Name:	Ethylene oxide [Oxirane]
Flammable/Toxic:	Toxic
CAS Number:	75-21-8
Process ID:	1000098028
Description:	Ethylene Oxide Unit 20
Prevention Program Level 3 ID:	1000083173
NAICS Code:	32511
Prevention Program Chemical ID:	1000103569
Chemical Name:	Propylene [1-Propene]
Flammable/Toxic:	Flammable
CAS Number:	115-07-1
Process ID:	1000098028
Description:	Ethylene Oxide Unit 20
Prevention Program Level 3 ID:	1000083173
NAICS Code:	32511
Prevention Program Chemical ID:	1000103604
Chemical Name:	Methane
Flammable/Toxic:	Flammable
CAS Number:	74-82-8

Process ID:	1000098028
Description:	Ethylene Oxide Unit 20
Prevention Program Level 3 ID:	1000083173
NAICS Code:	32511

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	08-Oct-2015

Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	26-Oct-2016

The Technique Used

What If:	
Checklist:	
What If/Checklist:	
HAZOP:	Yes
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	
Other Technique Used:	
PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	26-Oct-2018

Major Hazards Identified

Toxic Release:	Yes
Fire:	Yes
Explosion:	Yes
Runaway Reaction:	
Polymerization:	Yes
Overpressurization:	Yes
Corrosion:	Yes
Overfilling:	Yes
Contamination:	Yes
Equipment Failure:	Yes
Loss of Cooling, Heating, Electricity, Instrument Air:	Yes
Earthquake:	
Floods (Flood Plain):	Yes
Tornado:	
Hurricanes:	Yes
Other Major Hazard Identified:	

Process Controls in Use

Vents:	Yes
Relief Valves:	Yes
Check Valves:	Yes
Scrubbers:	Yes
Flares:	Yes

Manual Shutoffs:	Yes
Automatic Shutoffs:	Yes
Interlocks:	Yes
Alarms and Procedures:	Yes
Keyed Bypass:	Yes
Emergency Air Supply:	Yes
Emergency Power:	Yes
Backup Pump:	Yes
Grounding Equipment:	Yes
Inhibitor Addition:	
Rupture Disks:	Yes
Excess Flow Device:	
Quench System:	
Purge System:	Yes
None:	
Other Process Control in Use:	

Mitigation Systems in Use

Sprinkler System:	Yes
Dikes:	Yes
Fire Walls:	Yes
Blast Walls:	Yes
Deluge System:	Yes
Water Curtain:	
Enclosure:	Yes
Neutralization:	
None:	
Other Mitigation System in Use:	Fire Proofing, EO Dillution basin

Monitoring/Detection Systems in Use

Process Area Detectors:	Yes
Perimeter Monitors:	
None:	
Other Monitoring/Detection System in Use:	EO Personal Monitors

Changes Since Last PHA Update

Reduction in Chemical Inventory:	
Increase in Chemical Inventory:	
Change Process Parameters:	
Installation of Process Controls:	
Installation of Process Detection Systems:	
Installation of Perimeter Monitoring Systems:	
Installation of Mitigation Systems:	
None Recommended:	
None:	Yes
Other Changes Since Last PHA or PHA Update:	

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):	31-Mar-2020

Training

Training Revision Date (The date of the most recent review or revision of training programs):	01-Dec-2018

The Type of Training Provided

Classroom:	Yes
On the Job:	Yes
Other Training:	

The Type of Competency Testing Used

Written Tests:	Yes
Oral Tests:	Yes
Demonstration:	Yes
Observation:	Yes
Other Type of Competency Testing Used:	

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures):	01-Apr-2018
Equipment Inspection Date (The date of the most recent equipment inspection or test):	22-Jan-2019
Equipment Tested (Equipment most recently inspected or tested):	PSV-02070118

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures):	25-Jan-2019
Change Management Revision Date (The date of the most recent review or revision of management of change procedures):	15-Jan-2016

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review):	25-Jan-2019

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit):	18-Mar-2019

Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit):	04-Apr-2020

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)):	
Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation):	

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans):	09-Apr-2014

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures):	05-Jun-2016

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures):	15-Jul-2015
Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance):	29-Oct-2015

Confidential Business Information

CBI Claimed:	

Description

LDPE Sasol Chemicals USA LLC has a long standing commitment to worker and public safety. This commitment is demonstrated by the resources invested in accident prevention, training of qualified personnel, and considering safety in the design, installation, operation and maintenance of our process. Our process includes eleven (11) interconnecting units. Alcohol, Normal Paraffin, Ethylene, CoMonomers, Linear Alky Benzene, Ethoxylation, Linear Low Density Polyethylene, Low Density Polyethylene, Ethane Cracker, Ethylene Oxide and a Utilities Infrastructure (UO&I) All elements within the prevention program apply to each unit. Each unit is equipped with active mitigation within the prevention program apply to each unit. Each unit is equipped with active mitigation designed to assure a safe work place for our employees and surrounding neighbors. A more detailed description of our Prevention Program can be found in the executive summary

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000106080
Chemical Name:	Propylene [1-Propene]
Flammable/Toxic:	Flammable
CAS Number:	115-07-1
Process ID:	1000100654
Description:	LDPE (063)
Prevention Program Level 3 ID:	1000084976
NAICS Code:	32619
Prevention Program Chemical ID:	1000106079
Chemical Name:	Ethylene [Ethene]
Flammable/Toxic:	Flammable
CAS Number:	74-85-1
Process ID:	1000100654
Description:	LDPE (063)
Prevention Program Level 3 ID:	1000084976
NAICS Code:	32619

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	22-Jul-2016

Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	22-Jul-2016

The Technique Used

What If:	
Checklist:	
What If/Checklist:	Yes
HAZOP:	
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	

Other Technique Used:	
PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	18-Jun-2019

Major Hazards Identified

Toxic Release:	Yes
Fire:	Yes
Explosion:	Yes
Runaway Reaction:	
Polymerization:	Yes
Overpressurization:	Yes
Corrosion:	Yes
Overfilling:	Yes
Contamination:	Yes
Equipment Failure:	Yes
Loss of Cooling, Heating, Electricity, Instrument Air:	Yes
Earthquake:	
Floods (Flood Plain):	
Tornado:	
Hurricanes:	
Other Major Hazard Identified:	

Process Controls in Use

Vents:	Yes
Relief Valves:	Yes
Check Valves:	Yes
Scrubbers:	
Flares:	Yes
Manual Shutoffs:	
Automatic Shutoffs:	Yes
Interlocks:	Yes
Alarms and Procedures:	Yes
Keyed Bypass:	Yes
Emergency Air Supply:	Yes
Emergency Power:	Yes
Backup Pump:	Yes
Grounding Equipment:	Yes
Inhibitor Addition:	
Rupture Disks:	Yes
Excess Flow Device:	
Quench System:	
Purge System:	Yes
None:	
Other Process Control in Use:	

Mitigation Systems in Use

Sprinkler System:	Yes
Dikes:	Yes
Fire Walls:	Yes
Blast Walls:	Yes
Deluge System:	Yes
Water Curtain:	

Enclosure:	Yes
Neutralization:	
None:	
Other Mitigation System in Use:	

Monitoring/Detection Systems in Use

Process Area Detectors:	Yes
Perimeter Monitors:	
None:	
Other Monitoring/Detection System in Use:	

Changes Since Last PHA Update

Reduction in Chemical Inventory:	
Increase in Chemical Inventory:	
Change Process Parameters:	
Installation of Process Controls:	
Installation of Process Detection Systems:	
Installation of Perimeter Monitoring Systems:	
Installation of Mitigation Systems:	
None Recommended:	
None:	Yes
Other Changes Since Last PHA or PHA Update:	

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):	01-Nov-2019

Training

Training Revision Date (The date of the most recent review or revision of training programs):	01-May-2018

The Type of Training Provided

Classroom:	Yes
On the Job:	Yes
Other Training:	Computer Based Training

The Type of Competency Testing Used

Written Tests:	Yes
Oral Tests:	Yes
Demonstration:	Yes
Observation:	Yes
Other Type of Competency Testing Used:	

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures):	24-Jun-2019

Equipment Inspection Date (The date of the most recent equipment inspection or test):	03-Jun-2019
Equipment Tested (Equipment most recently inspected or tested):	PSV-06300906

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures):	01-Nov-2018
Change Management Revision Date (The date of the most recent review or revision of management of change procedures):	21-May-2018

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review):	01-Nov-2018

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit):	18-Mar-2019
Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit):	17-Mar-2020

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)):	
Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation):	

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans):	09-Apr-2014

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures):	15-Jun-2015

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures):	16-Jul-2015

Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance):	29-Oct-2015

Confidential Business Information

CBI Claimed:

Section 8. Program Level 2

No records found.

Section 9. Emergency Response

Written Emergency Response (ER) Plan

Community Plan (Is facility included in written community emergency response plan?):	Yes
Facility Plan (Does facility have its own written emergency response plan?):	Yes
Response Actions (Does ER plan include specific actions to be taken in response to accidental releases of regulated substance(s)?):	Yes
Public Information (Does ER plan include procedures for informing the public and local agencies responding to accidental release?):	Yes
Healthcare (Does facility's ER plan include information on emergency health care?):	Yes

Emergency Response Review

Review Date (Date of most recent review or update of facility's ER plan):	14-Dec-2017

Emergency Response Training

Training Date (Date of most recent review or update of facility's employees):	29-Oct-2019

Local Agency

Agency Name (Name of local agency with which the facility ER plan or response activities are coordinated):	Local Emergency Planning Commision
Agency Phone Number (Phone number of local agency with which the facility ER plan or response activities are coordinated):	(337) 437-3512

Subject to

OSHA Regulations at 29 CFR 1910.38:	Yes
OSHA Regulations at 29 CFR 1910.120:	Yes
Clean Water Regulations at 40 CFR 112:	Yes
RCRA Regulations at CFR 264, 265, and 279.52:	Yes
OPA 90 Regulations at 40 CFR 112, 33 CFR 154, 49 CFR 194, or 30 CFR 254:	Yes
State EPCRA Rules or Laws:	Yes
Other (Specify):	

Executive Summary

3271 LDEQ Facility ID Number
Sasol Chemicals USA, LLC. Lake Charles Chemical Complex
Risk Management Plan
Executive Summary

Sasol's Lake Charles Chemical Complex (LCCC) has a long-standing commitment to worker and public safety. This commitment is demonstrated by the resources invested in accident prevention, training of qualified personnel, and considering safety in the design, installation, operation and maintenance of our processes. Our policy is to implement reasonable controls to prevent chemical releases. However, if a release does occur, our trained personnel will respond to control, contain, and mitigate the release.

Sasol's Lake Charles Chemical Complex (LCCC) located in Westlake, Louisiana uses natural gas and by-products from refinery operations to produce specialty chemicals for detergents and cosmetics. The chemical complex uses or produces several regulated flammables such as ethylene, propane, butane, propylene, ethane, butane, hydrogen, methane, and pentane. Chemicals maintained on site at the LCCC listed on the EPA's list of toxic chemicals and are above EPA's threshold quantity are Chlorine, Ethylene Oxide and Hydrogen Fluoride.

Process Safety Information

The LCCC (Lake Charles Chemical Complex) maintains a variety of technical documents that are used to help maintain safe operation of the processes. These documents address chemical properties and associated hazards, limits for key process parameters, specific chemical inventories, and equipment design basis/configuration information. Specific departments within the chemical complex are assigned responsibility for maintaining up-to-date process safety information. Employees are provided training on how to locate the information from various computer terminals located throughout the chemical complex.

Chemical specific information, including exposure hazards and emergency response/exposure considerations, is provided in safety data sheets (SDS). This information is supplemented by documents that address known corrosion concerns and known hazards associated within inadvertent mixing of specific chemicals. For the different process areas, the chemical complex has documented safety related limits for specific process parameters (e.g. temperature, pressure, composition, etc.). The chemical complex ensures that the processes are maintained within the limits using process controls, monitoring instruments, protective instrument systems, and highly trained personnel.

The chemical complex also maintains an electronic database, that is accessible by both employees and contractor supervision, which provides information about the design pressure and temperature ratings, electrical classification, etc. This information in combination with written procedures and trained personnel provides a basis for establishing inspection and maintenance activities as well as for evaluating proposed process and facility changes to ensure that safety features in the process are not compromised.

Process Hazard Analysis

The Lake Charles Chemical Complex (LCCC) has a comprehensive program to help ensure the hazards associated with the various processes are identified and controlled. Within this program, each process is systemically examined to identify hazards and ensure that adequate controls are in place to manage these hazards.

The LCCC primarily uses the hazard and operability (HAZOP) analysis technique to perform these evaluations and the What-if/Checklist method for Process Hazard Analysis revalidations. The analyses are conducted using a team of people who have operating and maintenance experience as well as engineering expertise. The team identifies and evaluates hazards of the process as well as accident prevention and mitigation measures, and makes suggestions for additional prevention and/or mitigation measures when the team believes such measures are necessary.

The PHA team findings are made available to people associated with the process unit for comments and forwarded to management for resolution. Implementation of mitigation options in response to PHA findings is based on a relative ranking assigned by the PHA team. This ranking helps ensure that potential accident scenarios assigned the highest rank receive immediate attention. All approved mitigation options being implemented in response to PHA findings are tracked until they are complete. The final resolution

of each finding is documented and retained.

Operating Procedures

Operators, supervisors, and plant engineers' work together to develop and maintain operating procedures. These procedures define how tasks related to process operations are safely performed. At the Lake Charles Chemical Complex (LCCC), operating procedures: (1) are used to train employees and (2) serve as reference guides for appropriate actions to take during both normal operations and process upsets. Operating procedures include:
Steps for safely conducting activities
Applicable process safety information, such as safe operating limits,
Safety and health considerations, such as chemical hazards, personnel protective equipment required and steps to take if exposed to a particular chemical.

Plant personnel develop and maintain operating procedures that cover all phases of operations, including initial startup, normal operation, normal shutdown, emergency shutdown, startup following a turnaround or emergency shutdown, and temporary operations.

Training

The Lake Charles Chemical Complex (LCCC) trains its workers to safely and effectively perform their assigned tasks. The training program includes both initial and refresher training.

All new employees assigned as operators receive comprehensive training before being assigned to a specific operating unit. This training includes training on specific types of equipment, such as pumps and compressors, general overview of the process, properties and hazard substances in the process, and detailed review of complex procedures, such as, safe work practices and of emergency response. Oral reviews and written tests are used to verify that employees understand the training material before a new employee can report to a process unit. Once a new employee reports to a particular process unit, he receives detailed training with respect to process specific procedures and for specific tasks, before he is allowed to begin work in a specific operating unit.

Refresher training covers (1) a general overview of the process, (2) the properties and hazards of the substances in the process and, (3) a review of the process operating procedures and safe work practices. Oral review and written tests are used to verify that employees understand the training before an employee can resume work in the process. The operators have been consulted in safety meetings and through questionnaires regarding effectiveness and frequency of training. Recommendations are reviewed and changes to the training program are implemented as appropriate.

Management of Change (MOCA)

The Management of Change program for the LCCC evaluates and approves all proposed changes to chemicals, equipment, and procedures for covered processes to help ensure that a change does not negatively affect safe operations. Process changes that are determined to be a replacement in kind (e.g. replacing a valve with an identical valve) are allowed without completing a full management of change program. All other changes must be confirmed through a full management of change program to help ensure process safety information and procedures are updated, and affected employees are notified of the change.

Pre-Startup Safety Review (PSSR)

The Lake Charles Chemical Complex (LCCC) conducts a safety review of a new or modified process before the process is placed in service. The purpose of the PSSR is to ensure the safety features, procedures, personnel and equipment are appropriately prepared for startup prior to placing the equipment in service. The review provides one additional check to make sure construction of new processes and significant modifications to existing processes are, in accordance with the design specifications and that all supporting systems is operationally ready. The PSSR review team uses checklists to verify all aspects of readiness. A PSSR involves field verification of the construction and serves a quality assurance function by requiring verification that accident prevention program requirements are properly implemented.

Mechanical Integrity

The Lake Charles Chemical Complex (LCCC) has well established practices and procedures to maintain pressure vessels, piping systems, relief and vent systems, controls, emergency shutdown systems, and rotating equipment (pumps and compressors) in a safe operating condition. The basic aspects of this program include (1) conducting training, (2) developing written procedures, (3) performing inspections and test, (4) correcting identified deficiencies and, (5) applying quality assurance measures. In combination, these activities form a system that maintains the mechanical integrity of the process.

Maintenance personnel receive training on (1) an overview of the process, (2) safety and health hazards, (3) applicable maintenance procedures, (4) emergency response plans, and (5) applicable safe work practices. Written procedures help ensure that work is performed in consistent manner and provides basis for training. Inspections and tests are performed to help ensure that equipment functions as intended, and to verify that equipment is within acceptable limits (e.g. adequate wall thickness for pressure vessels). If a deficiency is identified, the equipment will be repaired in a timely manner. All outstanding deficiencies are tracked until such time a final solution has been implemented and documented.

Another integral part of the mechanical integrity program is quality assurance. The LCCC incorporates quality assurance into equipment purchase and repairs. This helps ensure that new equipment is suitable for intended use and that proper materials and spare parts are used when repairs are made.

Safe Work Practices

The Lake Charles Chemical Complex (LCCC) has a long standing safe work program in place to ensure worker safety. Examples of the program include (1) control of the entry/presence/exit of support personnel, (2) lockout/tagout procedures to ensure isolation of energy sources for equipment undergoing maintenance, (3) procedures for safe removal of hazardous materials before process piping or equipment is opened, (4) a permit and procedures to conduct spark producing activities (i.e. hot work), and (5) a permit and procedures to ensure that adequate precautions are in place before entry into a confined space. These procedures, along with training of affected personnel, form a system to help ensure that operations and maintenance activities are performed safely.

Incident Investigation

The Lake Charles Chemical Complex (LCCC) investigates all incidents that could reasonably have resulted in a serious injury to personnel, the public, or the environment so similar incidents can be prevented. The LCCC trains employees to identify and report any incident requiring investigation. The investigation is initiated within 48 hours of the incident. Depending on the incident, an investigation team may be formed. Results of the investigation are documented and appropriate changes are made.

Employee Participation

The Lake Charles Chemical Complex (LCCC) maintains a written employee participation program to help ensure that safety and environmental concerns of the plant workers are addressed. The plant encourages active participation of personnel in safety, health, and environmental activities at the plant. Employees are consulted and/or informed about all aspects of the RMP prevention program including PHA's (Process Hazard Analysis) and operating procedures.

Compliance Audits

The Lake Charles Chemical Complex (LCCC) audits the covered processes to be certain that the prevention program is effectively addressing safety, health, and environmental issues. The complex assembles an audit team that includes personnel knowledgeable in the processes. This team evaluates whether the prevention program satisfies the requirements of the RMP rule and whether the prevention program is sufficient to ensure safe operation of the complex. The results of the audit are documented, recommendations are resolved, and appropriate enhancements made to the operations of the LCCC.

Contractors

The Lake Charles Chemical Complex (LCCC) has established a program to help ensure that contractor activities are performed in a safe manner. This program reviews the safety record of the contractors to ensure the plant only hires contractors who can safety perform the desired task. The complex communicates to the contractor supervisor the hazards of the process on which they and their employees will work, the plants safe work practices, and the plants emergency response procedures. The plant requires that the contractor supervisors train each of their employees on hazards and procedures specific to the complex site.

Five Year Accident History

1. The facility had a small flash fire on 7/6/2019 during a normal operating procedure being executed during a routine sampling activity in the LLDPE Unit. One employee was injured during the flash fire and no off-site impact occurred.

2. The facility had an ethylene decomposition on 1/13/2020 in the LDPE Unit that resulted in an fire during the start-up of the unit. The fire damaged equipment and two employees sustained minor first aid injuries when they tripped and fell while evacuating the area. No offsite impact occurred from this event.

Emergency Response Program

The Lake Charles Chemical Complex (LCCC) emergency response program has been developed to meet the emergency planning, response, and notification requirements of the following regulations:

OSHA 29 CFR 1910.38 (a)-Employee Emergency Action Plans
OSHA 29 CFR 1910.120(q)-Hazardous Waste Operations and Emergency Response (HAZWOPER)
OSHA 29 CFR 1910.119(n)-Process Safety Management of Highly Hazardous Chemicals
OSHA 29 CFR 1910 Subpart L-Fire Protection
LADEQ LAC 33.1§ 3901- Notification Regulations for Unauthorized Discharge
LDPS Title 33, Part V, Subpart 2, Ch.101§ 1011-Release Reporting
EPA 40 CFR Part 302.6-Notification Requirements
EPA 40 CFR Part 355.40-Emergency Planning and Release Notification
EPA 40 CFR Part 68- Risk Management Programs for Chemical Accidental Release Program
EPA 40 CFR Part 355.30-Facility Coordinator and Emergency Response Plan
EPA 40 CFR Part 112-Spill prevention, Control and Countermeasures Plan
EPCRA 302-List of Extremely Hazardous Substances

The emergency response strategy for the Lake Charles Chemical Complex (LCCC) is to prevent and/or control emergency situations via the use of engineering, design, and fixed protection systems. The plant has an Emergency Response Team that is available 24 hours per day, and trained to respond and take actions to contain, control, and mitigate any release that might occur. The team has access to on-site emergency equipment which is appropriate for situations that could possibly occur at the LCCC including dedicated firewater supply/distribution, firefighting systems and appliances, and multiple pieces of apparatus for firefighting, medical, rescue, and hazardous material / spill response.
In addition to the considerable on-site resources, the LCCC is a member of the Southwest Louisiana Mutual Aid Association. This membership allows the LCCC (if needed) to draw on the emergency response resources of other industries and municipalities locally and regionally. Through both direct contact and via the mutual aid association, the LCCC coordinates with the Calcasieu Parish Office of Homeland Security and Emergency Response (OHSEP) who serves as the governmental liaison agency for the Parish LEPC.

Drills are conducted to assess the emergency response effort at the LCCC. These will be done on a regional basis to include multi-industry participation and on schedule to meet EPA deadlines.

Planned Changes to Improve Safety

The Lake Charles Chemical Complex (LCCC) constantly strives to improve safety and reduce risk through auditing, suggestions from employees, incident investigations, and the use of proper engineering standards, specifications and looking for user safer designs.

Title V Operating Permits
Ethoxylation Unit-2325
Linear Alkyl Benzene Unit-2894
Ethylene Unit-2743
Steam Unit1-2901
Steam Unit2-3167
ASU Unit-2895
Normal Paraffin Extract Unit-2896
Alcohol Unit-2865
Alumina Unit-2565
CoMonomer (ECHO) Unit-3088
- Utilities Infrastructure - 3170
- Utilities Infrastructure, fire water - 3124
- Linear Low Density Polyethylene - 3116-V1
- Ethylene (050)- 3118-V2
- EO\EG (020) - 3115 V2
- LDPE (063) - 3113 V2

The reason for the correction is to update chemical quantities

Section 1. Registration Information

Source Identification

Facility Name:	Sasol Chemicals USA LLC
Parent Company #1 Name:	
Parent Company #2 Name:	

Submission and Acceptance

Submission Type:	Re-submission
Subsequent RMP Submission Reason:	Process no longer covered (source has other processes that remain covered) (40 CFR 68.190(b)(7))
Description:	
Receipt Date:	28-Jan-2021
Postmark Date:	28-Jan-2021
Next Due Date:	28-Jan-2026
Completeness Check Date:	28-Jan-2021
Complete RMP:	Yes
De-Registration / Closed Reason:	
De-Registration / Closed Reason Other Text:	
De-Registered / Closed Date:	
De-Registered / Closed Effective Date:	
Certification Received:	Yes

Facility Identification

EPA Facility Identifier:	1000 0009 9886
Other EPA Systems Facility ID:	LAR000041087
Facility Registry System ID:	

Dun and Bradstreet Numbers (DUNS)

Facility DUNS:	102663713
Parent Company #1 DUNS:	102666872
Parent Company #2 DUNS:	

Facility Location Address

Street 1:	2201 Old Spanish Trail
Street 2:	
City:	Westlake
State:	LOUISIANA
ZIP:	70669
ZIP4:	0727
County:	CALCASIEU

Facility Latitude and Longitude

Latitude (decimal):	30.250556
Longitude (decimal):	-093.281111
Lat/Long Method:	Interpolation - Photo
Lat/Long Description:	Center of Facility
Horizontal Accuracy Measure:	25

Horizontal Reference Datum Name:	North American Datum of 1983
Source Map Scale Number:	24000

Owner or Operator

Operator Name:	Sasol Chemicals USA LLC
Operator Phone:	(337) 494-5450

Mailing Address

Operator Street 1:	2201 Old Spanish Trail
Operator Street 2:	
Operator City:	Westlake
Operator State:	LOUISIANA
Operator ZIP:	70669
Operator ZIP4:	0727
Operator Foreign State or Province:	
Operator Foreign ZIP:	
Operator Foreign Country:	

Name and title of person or position responsible for Part 68 (RMP) Implementation

RMP Name of Person:	Pieter Potgieter
RMP Title of Person or Position:	Vice President SHE and ERM
RMP E-mail Address:	Pieter.potgieter@us.sasol.com

Emergency Contact

Emergency Contact Name:	Scott Tyler
Emergency Contact Title:	Senior Manager Safety and Security
Emergency Contact Phone:	(337) 310-8409
Emergency Contact 24-Hour Phone:	(337) 494-5450
Emergency Contact Ext. or PIN:	
Emergency Contact E-mail Address:	scott.tyler@us.sasol.com

Other Points of Contact

Facility or Parent Company E-mail Address:	pieter.potgieter@us.sasol.com
Facility Public Contact Phone:	(337) 494-5301
Facility or Parent Company WWW Homepage Address:	www.sasolnorthamerica.com

Local Emergency Planning Committee

LEPC:	Calcasieu Parish LEPC

Full Time Equivalent Employees

Number of Full Time Employees (FTE) on Site:	664
FTE Claimed as CBI:	

Covered By

OSHA PSM :	Yes

EPCRA 302 :	Yes
CAA Title V:	Yes
Air Operating Permit ID:	3271

OSHA Ranking

OSHA Star or Merit Ranking:

Last Safety Inspection

Last Safety Inspection (By an External Agency) Date:	18-Mar-2014
Last Safety Inspection Performed By an External Agency:	LDEQ

Predictive Filing

Did this RMP involve predictive filing?:

Preparer Information

Preparer Name:	Michael McCarble
Preparer Phone:	(337) 494-5170
Preparer Street 1:	2201 Old Spanish Trail
Preparer Street 2:	
Preparer City:	Westlake
Preparer State:	LOUISIANA
Preparer ZIP:	70669
Preparer ZIP4:	0727
Preparer Foreign State:	
Preparer Foreign Country:	
Preparer Foreign ZIP:	

Confidential Business Information (CBI)

CBI Claimed:
Substantiation Provided:
Unsanitized RMP Provided:

Reportable Accidents

Reportable Accidents: See Section 6. Accident History below to determine if there were any accidentsreported for this RMP.

Process Chemicals

Process ID:	1000114025
Description:	Chemical Warehouse
Process Chemical ID:	1000142520
Program Level:	Program Level 3 process
Chemical Name:	Dimethyldichlorosilane [Silane, dichlorodimethyl-]
CAS Number:	75-78-5
Quantity (lbs):	9354
CBI Claimed:	
Flammable/Toxic:	Toxic

Process ID:	1000114027
Description:	Ethylene Oxide Unit 20
Process Chemical ID:	1000142530
Program Level:	Program Level 3 process
Chemical Name:	Ethylene [Ethene]
CAS Number:	74-85-1
Quantity (lbs):	45155
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000114027
Description:	Ethylene Oxide Unit 20
Process Chemical ID:	1000142531
Program Level:	Program Level 3 process
Chemical Name:	Ethylene oxide [Oxirane]
CAS Number:	75-21-8
Quantity (lbs):	3104648
CBI Claimed:	
Flammable/Toxic:	Toxic

Process ID:	1000114027
Description:	Ethylene Oxide Unit 20
Process Chemical ID:	1000142532
Program Level:	Program Level 3 process
Chemical Name:	Propylene [1-Propene]
CAS Number:	115-07-1
Quantity (lbs):	10222
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000114027
Description:	Ethylene Oxide Unit 20
Process Chemical ID:	1000142533
Program Level:	Program Level 3 process
Chemical Name:	Methane
CAS Number:	74-82-8
Quantity (lbs):	43286
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000114029
Description:	Linear Alkyl Benzene Unit
Process Chemical ID:	1000142536
Program Level:	Program Level 3 process

Chemical Name:	Hydrogen fluoride/Hydrofluoric acid (conc 50% or greater) [Hydrofluoric acid]
CAS Number:	7664-39-3
Quantity (lbs):	396260
CBI Claimed:	
Flammable/Toxic:	Toxic

Process ID:	1000114029
Description:	Linear Alkyl Benzene Unit
Process Chemical ID:	1000142537
Program Level:	Program Level 3 process
Chemical Name:	Chlorine
CAS Number:	7782-50-5
Quantity (lbs):	4000
CBI Claimed:	
Flammable/Toxic:	Toxic

Process ID:	1000114030
Description:	Ethoxylation Units
Process Chemical ID:	1000142538
Program Level:	Program Level 3 process
Chemical Name:	Ethylene oxide [Oxirane]
CAS Number:	75-21-8
Quantity (lbs):	6299667
CBI Claimed:	
Flammable/Toxic:	Toxic

Process ID:	1000114031
Description:	Ethylene Unit (007)
Process Chemical ID:	1000142539
Program Level:	Program Level 3 process
Chemical Name:	1,3-Butadiene
CAS Number:	106-99-0
Quantity (lbs):	601253
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000114031
Description:	Ethylene Unit (007)
Process Chemical ID:	1000142540
Program Level:	Program Level 3 process
Chemical Name:	Propylene [1-Propene]
CAS Number:	115-07-1
Quantity (lbs):	799056
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000114031
Description:	Ethylene Unit (007)
Process Chemical ID:	1000142541
Program Level:	Program Level 3 process
Chemical Name:	Ethane
CAS Number:	74-84-0
Quantity (lbs):	251497
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000114031
Description:	Ethylene Unit (007)
Process Chemical ID:	1000142542
Program Level:	Program Level 3 process
Chemical Name:	Butene
CAS Number:	25167-67-3
Quantity (lbs):	120100
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000114031
Description:	Ethylene Unit (007)
Process Chemical ID:	1000142543
Program Level:	Program Level 3 process
Chemical Name:	Ethylene [Ethene]
CAS Number:	74-85-1
Quantity (lbs):	271086
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000114031
Description:	Ethylene Unit (007)
Process Chemical ID:	1000142544
Program Level:	Program Level 3 process
Chemical Name:	Butane
CAS Number:	106-97-8
Quantity (lbs):	81229
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000114031
Description:	Ethylene Unit (007)
Process Chemical ID:	1000142545
Program Level:	Program Level 3 process
Chemical Name:	Methane
CAS Number:	74-82-8
Quantity (lbs):	11958

CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000114031
Description:	Ethylene Unit (007)
Process Chemical ID:	1000142546
Program Level:	Program Level 3 process
Chemical Name:	Propane
CAS Number:	74-98-6
Quantity (lbs):	52761
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000114031
Description:	Ethylene Unit (007)
Process Chemical ID:	1000142547
Program Level:	Program Level 3 process
Chemical Name:	Chlorine
CAS Number:	7782-50-5
Quantity (lbs):	24000
CBI Claimed:	
Flammable/Toxic:	Toxic

Process ID:	1000114032
Description:	Normal Paraffin Ext (016)
Process Chemical ID:	1000142548
Program Level:	Program Level 3 process
Chemical Name:	Pentane
CAS Number:	109-66-0
Quantity (lbs):	1019961
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000114033
Description:	Alcohol Units
Process Chemical ID:	1000142549
Program Level:	Program Level 3 process
Chemical Name:	Ethylene [Ethene]
CAS Number:	74-85-1
Quantity (lbs):	33440
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000114033
Description:	Alcohol Units

Process Chemical ID:	1000142550
Program Level:	Program Level 3 process
Chemical Name:	Pentane
CAS Number:	109-66-0
Quantity (lbs):	59153
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000114034
Description:	CoMonomers (012)
Process Chemical ID:	1000142551
Program Level:	Program Level 3 process
Chemical Name:	Propylene [1-Propene]
CAS Number:	115-07-1
Quantity (lbs):	140368
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000114034
Description:	CoMonomers (012)
Process Chemical ID:	1000142552
Program Level:	Program Level 3 process
Chemical Name:	Ethylene [Ethene]
CAS Number:	74-85-1
Quantity (lbs):	260690
CBI Claimed:	
Flammable/Toxic:	Flammable

Process NAICS

Process ID:	1000114029
Process NAICS ID:	1000115442
Program Level:	Program Level 3 process
NAICS Code:	32511
NAICS Description:	Petrochemical Manufacturing

Process ID:	1000114030
Process NAICS ID:	1000115443
Program Level:	Program Level 3 process
NAICS Code:	32511
NAICS Description:	Petrochemical Manufacturing

Process ID:	1000114031
Process NAICS ID:	1000115444
Program Level:	Program Level 3 process
NAICS Code:	32511
NAICS Description:	Petrochemical Manufacturing

Process ID:	1000114032
Process NAICS ID:	1000115445
Program Level:	Program Level 3 process
NAICS Code:	32511
NAICS Description:	Petrochemical Manufacturing

Process ID:	1000114033
Process NAICS ID:	1000115446
Program Level:	Program Level 3 process
NAICS Code:	32511
NAICS Description:	Petrochemical Manufacturing

Process ID:	1000114034
Process NAICS ID:	1000115447
Program Level:	Program Level 3 process
NAICS Code:	32511
NAICS Description:	Petrochemical Manufacturing

Process ID:	1000114025
Process NAICS ID:	1000115438
Program Level:	Program Level 3 process
NAICS Code:	49311
NAICS Description:	General Warehousing and Storage

Process ID:	1000114027
Process NAICS ID:	1000115440
Program Level:	Program Level 3 process
NAICS Code:	32511
NAICS Description:	Petrochemical Manufacturing

Section 2. Toxics: Worst Case

Toxic Worst ID: 1000092108

Percent Weight:	99.5
Physical State:	Liquid
Model Used:	EPA's RMP*Comp(TM)
Release Duration (mins):	10
Wind Speed (m/sec):	1.5
Atmospheric Stability Class:	F
Topography:	Urban

Passive Mitigation Considered

Dikes:	Yes
Enclosures:	
Berms:	
Drains:	Yes
Sumps:	
Other Type:	water curtain

Toxic Worst ID: 1000092109

Percent Weight:	99.9
Physical State:	Gas liquified by refrigeration
Model Used:	EPA's RMP*Comp(TM)
Release Duration (mins):	10
Wind Speed (m/sec):	1.5
Atmospheric Stability Class:	F
Topography:	Urban

Passive Mitigation Considered

Dikes:	Yes
Enclosures:	
Berms:	Yes
Drains:	
Sumps:	Yes
Other Type:	

Section 3. Toxics: Alternative Release

Toxic Alter ID: 1000097906

Percent Weight:	14.0
Physical State:	Liquid
Model Used:	EPA's RMP*Comp(TM)
Wind Speed (m/sec):	3.0
Atmospheric Stability Class:	D
Topography:	Urban

Passive Mitigation Considered

Dikes:	Yes
Enclosures:	
Berms:	
Drains:	
Sumps:	
Other Type:	

Active Mitigation Considered

Sprinkler System:	Yes
Deluge System:	
Water Curtain:	
Neutralization:	
Excess Flow Valve:	
Flares:	
Scrubbers:	
Emergency Shutdown:	
Other Type:	

Toxic Alter ID: 1000097907

Percent Weight:	100.0
Physical State:	Gas liquified by refrigeration
Model Used:	EPA's RMP*Comp(TM)
Wind Speed (m/sec):	3.0
Atmospheric Stability Class:	D
Topography:	Urban

Passive Mitigation Considered

Dikes:	Yes
Enclosures:	
Berms:	
Drains:	
Sumps:	Yes
Other Type:	

Active Mitigation Considered

Sprinkler System:	Yes
Deluge System:	
Water Curtain:	
Neutralization:	
Excess Flow Valve:	
Flares:	
Scrubbers:	

Emergency Shutdown:
Other Type:

Toxic Alter ID: 1000097908

Percent Weight:	100.0
Physical State:	Gas
Model Used:	EPA's RMP*Comp(TM)
Wind Speed (m/sec):	3.0
Atmospheric Stability Class:	D
Topography:	Urban

Passive Mitigation Considered

Dikes:	Yes
Enclosures:	
Berms:	
Drains:	Yes
Sumps:	
Other Type:	

Active Mitigation Considered

Sprinkler System:	Yes
Deluge System:	Yes
Water Curtain:	Yes
Neutralization:	Yes
Excess Flow Valve:	
Flares:	
Scrubbers:	
Emergency Shutdown:	Yes
Other Type:	

Toxic Alter ID: 1000097909

Percent Weight:	100.0
Physical State:	Gas
Model Used:	EPA's RMP*Comp(TM)
Wind Speed (m/sec):	3.0
Atmospheric Stability Class:	D
Topography:	Urban

Passive Mitigation Considered

Dikes:
Enclosures:
Berms:
Drains:
Sumps:
Other Type:

Active Mitigation Considered

Sprinkler System:
Deluge System:
Water Curtain:
Neutralization:
Excess Flow Valve:
Flares:

Scrubbers:	
Emergency Shutdown:	
Other Type:	Fire Monitors

Toxic Alter ID: 1000097910

Percent Weight:	100.0
Physical State:	Liquid
Model Used:	PHAST Dispersion Modeling
Wind Speed (m/sec):	3.8
Atmospheric Stability Class:	D
Topography:	Urban

Passive Mitigation Considered

Dikes:	
Enclosures:	
Berms:	
Drains:	
Sumps:	
Other Type:	

Active Mitigation Considered

Sprinkler System:	
Deluge System:	Yes
Water Curtain:	
Neutralization:	
Excess Flow Valve:	
Flares:	
Scrubbers:	
Emergency Shutdown:	Yes
Other Type:	

Toxic Alter ID: 1000097911

Percent Weight:	100.0
Physical State:	Gas
Model Used:	EPA's RMP*Comp(TM)
Wind Speed (m/sec):	3.0
Atmospheric Stability Class:	D
Topography:	Urban

Passive Mitigation Considered

Dikes:	
Enclosures:	
Berms:	
Drains:	Yes
Sumps:	
Other Type:	

Active Mitigation Considered

Sprinkler System:	
Deluge System:	
Water Curtain:	
Neutralization:	
Excess Flow Valve:	

Flares:
Scrubbers:
Emergency Shutdown:
Other Type: Fire Monitors

Section 4. Flammables: Worst Case

Flammable Worst ID: 1000069545

Model Used:	EPA's OCA Guidance Reference Tables or Equations
Endpoint used:	1 PSI

Passive Mitigation Considered

Blast Walls:
Other Type:

Flammable Worst ID: 1000069546

Model Used:	EPA's RMP*Comp(TM)
Endpoint used:	1 PSI

Passive Mitigation Considered

Blast Walls:
Other Type:

Flammable Worst ID: 1000069640

Model Used:	EPA's RMP*Comp(TM)
Endpoint used:	1 PSI

Passive Mitigation Considered

Blast Walls:
Other Type:

Section 5. Flammables: Alternative Release

Flammable Alter ID: 1000065136

Model Used:	PHAST

Passive Mitigation Considered

Dikes:	Yes
Fire Walls:	
Blast Walls:	
Enclosures:	
Other Type:	

Active Mitigation Considered

Sprinkler System:	
Deluge System:	
Water Curtain:	
Excess Flow Valve:	
Other Type:	

Section 6. Accident History

No records found.

Section 7. Program Level 3

Description

LAB Sasol Chemicals USA LLC has a long standing commitment to worker and public safety. This commitment is demonstrated by the resources invested in accident prevention, training of qualified personnel, and considering safety in the design, installation, operation and maintenance of our process. Our process includes seven (7) interconnecting units: Alcohol, Normal Paraffin, Ethylene, CoMonomers, Linear Alky Benzene, Ethoxylation, Ethylene Oxide Unit and a Chemical Warehouse. All elements within the prevention program apply to each unit. Each unit is equipped with active mitigation within the prevention program apply to each unit. Each unit is equipped with active mitigation designed to assure a safe work place for our employees and surrounding neighbors. A more detailed description of our Prevention Program can be found in the executive summary.

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000121581
Chemical Name:	Hydrogen fluoride/Hydrofluoric acid (conc 50% or greater) [Hydrofluoric acid]
Flammable/Toxic:	Toxic
CAS Number:	7664-39-3
Process ID:	1000114029
Description:	Linear Alkyl Benzene Unit
Prevention Program Level 3 ID:	1000097452
NAICS Code:	32511
Prevention Program Chemical ID:	1000121582
Chemical Name:	Chlorine
Flammable/Toxic:	Toxic
CAS Number:	7782-50-5
Process ID:	1000114029
Description:	Linear Alkyl Benzene Unit
Prevention Program Level 3 ID:	1000097452
NAICS Code:	32511

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	09-Dec-2020

Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	14-Apr-2020

The Technique Used

What If:	
Checklist:	
What If/Checklist:	Yes
HAZOP:	

Failure Mode and Effects Analysis:	
Fault Tree Analysis:	
Other Technique Used:	
PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	13-Apr-2022

Major Hazards Identified

Toxic Release:	Yes
Fire:	Yes
Explosion:	
Runaway Reaction:	
Polymerization:	
Overpressurization:	Yes
Corrosion:	Yes
Overfilling:	
Contamination:	
Equipment Failure:	Yes
Loss of Cooling, Heating, Electricity, Instrument Air:	Yes
Earthquake:	
Floods (Flood Plain):	
Tornado:	Yes
Hurricanes:	Yes
Other Major Hazard Identified:	

Process Controls in Use

Vents:	Yes
Relief Valves:	Yes
Check Valves:	Yes
Scrubbers:	Yes
Flares:	Yes
Manual Shutoffs:	Yes
Automatic Shutoffs:	Yes
Interlocks:	Yes
Alarms and Procedures:	Yes
Keyed Bypass:	Yes
Emergency Air Supply:	Yes
Emergency Power:	Yes
Backup Pump:	Yes
Grounding Equipment:	Yes
Inhibitor Addition:	
Rupture Disks:	Yes
Excess Flow Device:	Yes
Quench System:	
Purge System:	Yes
None:	
Other Process Control in Use:	

Mitigation Systems in Use

Sprinkler System:	Yes
Dikes:	Yes
Fire Walls:	
Blast Walls:	Yes

Deluge System:	Yes
Water Curtain:	Yes
Enclosure:	
Neutralization:	Yes
None:	
Other Mitigation System in Use:	

Monitoring/Detection Systems in Use

Process Area Detectors:	Yes
Perimeter Monitors:	Yes
None:	
Other Monitoring/Detection System in Use:	

Changes Since Last PHA Update

Reduction in Chemical Inventory:	
Increase in Chemical Inventory:	
Change Process Parameters:	Yes
Installation of Process Controls:	
Installation of Process Detection Systems:	
Installation of Perimeter Monitoring Systems:	Yes
Installation of Mitigation Systems:	
None Recommended:	
None:	
Other Changes Since Last PHA or PHA Update:	

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):	07-Dec-2020

Training

Training Revision Date (The date of the most recent review or revision of training programs):	05-Nov-2020

The Type of Training Provided

Classroom:	Yes
On the Job:	Yes
Other Training:	Computer Based Training

The Type of Competency Testing Used

Written Tests:	Yes
Oral Tests:	Yes
Demonstration:	
Observation:	Yes
Other Type of Competency Testing Used:	

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures):	15-Aug-2020
Equipment Inspection Date (The date of the most recent equipment inspection or test):	03-Nov-2020
Equipment Tested (Equipment most recently inspected or tested):	PSV-805

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures):	07-Dec-2020
Change Management Revision Date (The date of the most recent review or revision of management of change procedures):	10-Oct-2019

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review):	25-Nov-2020

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit):	18-Mar-2019
Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit):	30-Jun-2022

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)):	15-Jun-2020
Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation):	21-Oct-2020

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans):	08-Jan-2019

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures):	02-Jul-2020

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures):	22-Oct-2019
Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance):	01-Nov-2020

Confidential Business Information

CBI Claimed:

Description

ETO Sasol Chemicals USA LLC has a long standing commitment to worker and public safety. This commitment is demonstrated by the resources invested in accident prevention, training of qualified personnel, and considering safety in the design, installation, operation and maintenance of our process. Our process includes seven (7) interconnecting units. Alcohol, Normal Paraffin, Ethylene, CoMonomers, Linear Alky Benzene, Ethoxylation, Ethylene Oxide Unit and a Chemical Warehouse. All elements within the prevention program apply to each unit. Each unit is equipped with active mitigation within the prevention program apply to each unit. Each unit is equipped with active mitigation designed to assure a safe work place for our employees and surrounding neighbors. A more detailed description of our Prevention Program can be found in the executive summary.

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000121583
Chemical Name:	Ethylene oxide [Oxirane]
Flammable/Toxic:	Toxic
CAS Number:	75-21-8
Process ID:	1000114030
Description:	Ethoxylation Units
Prevention Program Level 3 ID:	1000097453
NAICS Code:	32511

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	09-Dec-2020

Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	30-Oct-2019

The Technique Used

What If:	
Checklist:	
What If/Checklist:	Yes
HAZOP:	
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	
Other Technique Used:	
PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	01-Mar-2021

Major Hazards Identified

Toxic Release:	Yes
Fire:	Yes
Explosion:	Yes
Runaway Reaction:	Yes
Polymerization:	Yes
Overpressurization:	Yes

Corrosion:	Yes
Overfilling:	Yes
Contamination:	Yes
Equipment Failure:	Yes
Loss of Cooling, Heating, Electricity, Instrument Air:	Yes
Earthquake:	
Floods (Flood Plain):	
Tornado:	Yes
Hurricanes:	Yes
Other Major Hazard Identified:	

Process Controls in Use

Vents:	Yes
Relief Valves:	Yes
Check Valves:	Yes
Scrubbers:	Yes
Flares:	Yes
Manual Shutoffs:	Yes
Automatic Shutoffs:	Yes
Interlocks:	Yes
Alarms and Procedures:	Yes
Keyed Bypass:	
Emergency Air Supply:	Yes
Emergency Power:	Yes
Backup Pump:	Yes
Grounding Equipment:	Yes
Inhibitor Addition:	
Rupture Disks:	Yes
Excess Flow Device:	
Quench System:	
Purge System:	Yes
None:	
Other Process Control in Use:	

Mitigation Systems in Use

Sprinkler System:	Yes
Dikes:	Yes
Fire Walls:	Yes
Blast Walls:	Yes
Deluge System:	Yes
Water Curtain:	
Enclosure:	
Neutralization:	
None:	
Other Mitigation System in Use:	

Monitoring/Detection Systems in Use

Process Area Detectors:	Yes
Perimeter Monitors:	Yes
None:	
Other Monitoring/Detection System in Use:	

Changes Since Last PHA Update

Reduction in Chemical Inventory:	
Increase in Chemical Inventory:	
Change Process Parameters:	
Installation of Process Controls:	Yes
Installation of Process Detection Systems:	
Installation of Perimeter Monitoring Systems:	
Installation of Mitigation Systems:	
None Recommended:	
None:	
Other Changes Since Last PHA or PHA Update:	

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):	07-Dec-2020

Training

Training Revision Date (The date of the most recent review or revision of training programs):	06-May-2019

The Type of Training Provided

Classroom:	Yes
On the Job:	Yes
Other Training:	Computer Based Training

The Type of Competency Testing Used

Written Tests:	Yes
Oral Tests:	Yes
Demonstration:	Yes
Observation:	Yes
Other Type of Competency Testing Used:	

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures):	01-Aug-2020
Equipment Inspection Date (The date of the most recent equipment inspection or test):	01-Nov-2020
Equipment Tested (Equipment most recently inspected or tested):	Z6-704

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures):	09-Dec-2020
Change Management Revision Date (The date of the most recent review or revision of management of change procedures):	10-Oct-2019

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review):	09-Dec-2020

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit):	18-Mar-2019
Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit):	30-Jun-2022

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)):	30-Mar-2020
Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation):	10-Nov-2020

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans):	08-Jan-2019

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures):	02-Jul-2020

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures):	22-Oct-2019
Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance):	01-Nov-2020

Confidential Business Information

CBI Claimed:	

Description

Ethy1 Sasol Chemicals USA LLC has a long standing commitment to worker and public safety. This commitment is demonstrated by the resources invested in accident prevention, training of qualified personnel, and considering safety in the design, installation, operation and maintenance of our process. Our process includes seven (7) interconnecting units: Alcohol, Normal Paraffin, Ethylene, CoMonomers, Linear Alky Benzene, Ethoxylation, Ethylene Oxide Unit and a Chemical Warehouse. All elements within the prevention program apply to each unit. Each unit is equipped with active mitigation within the prevention program apply to each unit. Each unit is equipped with active mitigation designed to assure a safe work place for our employees and surrounding neighbors. A more detailed description of our Prevention Program can be found in the executive summary.

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000121592
Chemical Name:	Chlorine
Flammable/Toxic:	Toxic
CAS Number:	7782-50-5
Process ID:	1000114031
Description:	Ethylene Unit (007)
Prevention Program Level 3 ID:	1000097454
NAICS Code:	32511
Prevention Program Chemical ID:	1000121590
Chemical Name:	Methane
Flammable/Toxic:	Flammable
CAS Number:	74-82-8
Process ID:	1000114031
Description:	Ethylene Unit (007)
Prevention Program Level 3 ID:	1000097454
NAICS Code:	32511
Prevention Program Chemical ID:	1000121586
Chemical Name:	Ethane
Flammable/Toxic:	Flammable
CAS Number:	74-84-0
Process ID:	1000114031
Description:	Ethylene Unit (007)
Prevention Program Level 3 ID:	1000097454
NAICS Code:	32511
Prevention Program Chemical ID:	1000121588
Chemical Name:	Ethylene [Ethene]
Flammable/Toxic:	Flammable
CAS Number:	74-85-1

Process ID:	1000114031
Description:	Ethylene Unit (007)
Prevention Program Level 3 ID:	1000097454
NAICS Code:	32511

Prevention Program Chemical ID:	1000121591
Chemical Name:	Propane
Flammable/Toxic:	Flammable
CAS Number:	74-98-6

Process ID:	1000114031
Description:	Ethylene Unit (007)
Prevention Program Level 3 ID:	1000097454
NAICS Code:	32511

Prevention Program Chemical ID:	1000121589
Chemical Name:	Butane
Flammable/Toxic:	Flammable
CAS Number:	106-97-8

Process ID:	1000114031
Description:	Ethylene Unit (007)
Prevention Program Level 3 ID:	1000097454
NAICS Code:	32511

Prevention Program Chemical ID:	1000121584
Chemical Name:	1,3-Butadiene
Flammable/Toxic:	Flammable
CAS Number:	106-99-0

Process ID:	1000114031
Description:	Ethylene Unit (007)
Prevention Program Level 3 ID:	1000097454
NAICS Code:	32511

Prevention Program Chemical ID:	1000121585
Chemical Name:	Propylene [1-Propene]
Flammable/Toxic:	Flammable
CAS Number:	115-07-1

Process ID:	1000114031
Description:	Ethylene Unit (007)
Prevention Program Level 3 ID:	1000097454
NAICS Code:	32511

Prevention Program Chemical ID:	1000121587
Chemical Name:	Butene
Flammable/Toxic:	Flammable
CAS Number:	25167-67-3

Process ID:	1000114031
Description:	Ethylene Unit (007)
Prevention Program Level 3 ID:	1000097454
NAICS Code:	32511

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	08-Dec-2020

Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	17-Feb-2020

The Technique Used

What If:	
Checklist:	
What If/Checklist:	Yes
HAZOP:	
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	
Other Technique Used:	
PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	16-Feb-2022

Major Hazards Identified

Toxic Release:	Yes
Fire:	Yes
Explosion:	Yes
Runaway Reaction:	Yes
Polymerization:	
Overpressurization:	Yes
Corrosion:	Yes
Overfilling:	Yes
Contamination:	Yes
Equipment Failure:	Yes
Loss of Cooling, Heating, Electricity, Instrument Air:	Yes
Earthquake:	
Floods (Flood Plain):	
Tornado:	Yes
Hurricanes:	
Other Major Hazard Identified:	

Process Controls in Use

Vents:	Yes
Relief Valves:	Yes
Check Valves:	Yes
Scrubbers:	Yes
Flares:	Yes
Manual Shutoffs:	Yes
Automatic Shutoffs:	Yes
Interlocks:	Yes
Alarms and Procedures:	Yes
Keyed Bypass:	Yes
Emergency Air Supply:	Yes
Emergency Power:	Yes
Backup Pump:	Yes
Grounding Equipment:	Yes
Inhibitor Addition:	
Rupture Disks:	Yes
Excess Flow Device:	Yes
Quench System:	Yes
Purge System:	Yes
None:	
Other Process Control in Use:	

Mitigation Systems in Use

Sprinkler System:	Yes
Dikes:	Yes
Fire Walls:	Yes
Blast Walls:	Yes
Deluge System:	Yes
Water Curtain:	Yes
Enclosure:	
Neutralization:	Yes
None:	
Other Mitigation System in Use:	

Monitoring/Detection Systems in Use

Process Area Detectors:	Yes
Perimeter Monitors:	Yes
None:	
Other Monitoring/Detection System in Use:	

Changes Since Last PHA Update

Reduction in Chemical Inventory:	
Increase in Chemical Inventory:	
Change Process Parameters:	Yes
Installation of Process Controls:	
Installation of Process Detection Systems:	
Installation of Perimeter Monitoring Systems:	
Installation of Mitigation Systems:	
None Recommended:	
None:	
Other Changes Since Last PHA or PHA Update:	

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):	20-Nov-2020

Training

Training Revision Date (The date of the most recent review or revision of training programs):	26-May-2020

The Type of Training Provided

Classroom:	Yes
On the Job:	Yes
Other Training:	Computer Based Training

The Type of Competency Testing Used

Written Tests:	Yes
Oral Tests:	Yes
Demonstration:	Yes
Observation:	
Other Type of Competency Testing Used:	

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures):	23-Nov-2020
Equipment Inspection Date (The date of the most recent equipment inspection or test):	03-Oct-2020
Equipment Tested (Equipment most recently inspected or tested):	X7-202

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures):	09-Dec-2020
Change Management Revision Date (The date of the most recent review or revision of management of change procedures):	10-Oct-2019

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review):	09-Dec-2020

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit):	18-Mar-2019
Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit):	30-Jun-2022

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)):	26-Dec-2020
Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation):	31-Dec-2020

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans):	08-Jan-2019

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures):	02-Jul-2020

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures):	22-Oct-2019
Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance):	01-Nov-2020

Confidential Business Information

CBI Claimed:

Description

NPU Sasol Chemicals USA LLC has a long standing commitment to worker and public safety. This commitment is demonstrated by the resources invested in accident prevention, training of qualified personnel, and considering safety in the design, installation, operation and maintenance of our process. Our process includes seven (7) interconnecting units: Alcohol, Normal Paraffin, Ethylene, CoMonomers, Linear Alky Benzene, Ethoxylation, Ethylene Oxide Unit and a Chemical Warehouse. All elements within the prevention program apply to each unit. Each unit is equipped with active mitigation within the prevention program apply to each unit. Each unit is equipped with active mitigation designed to assure a safe work place for our employees and surrounding neighbors. A more detailed description of our Prevention Program can be found in the executive summary.

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000121593
Chemical Name:	Pentane
Flammable/Toxic:	Flammable
CAS Number:	109-66-0
Process ID:	1000114032
Description:	Normal Paraffin Ext (016)
Prevention Program Level 3 ID:	1000097455
NAICS Code:	32511

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	07-Dec-2020

Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	09-Jan-2020

The Technique Used

What If:	
Checklist:	
What If/Checklist:	Yes
HAZOP:	
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	
Other Technique Used:	
PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	08-Jan-2022

Major Hazards Identified

Toxic Release:	Yes
Fire:	Yes
Explosion:	Yes
Runaway Reaction:	Yes
Polymerization:	
Overpressurization:	Yes

Corrosion:	Yes
Overfilling:	Yes
Contamination:	Yes
Equipment Failure:	Yes
Loss of Cooling, Heating, Electricity, Instrument Air:	Yes
Earthquake:	
Floods (Flood Plain):	
Tornado:	Yes
Hurricanes:	Yes
Other Major Hazard Identified:	

Process Controls in Use

Vents:	Yes
Relief Valves:	Yes
Check Valves:	Yes
Scrubbers:	
Flares:	Yes
Manual Shutoffs:	Yes
Automatic Shutoffs:	Yes
Interlocks:	Yes
Alarms and Procedures:	Yes
Keyed Bypass:	Yes
Emergency Air Supply:	Yes
Emergency Power:	Yes
Backup Pump:	Yes
Grounding Equipment:	Yes
Inhibitor Addition:	
Rupture Disks:	Yes
Excess Flow Device:	Yes
Quench System:	
Purge System:	Yes
None:	
Other Process Control in Use:	

Mitigation Systems in Use

Sprinkler System:	Yes
Dikes:	Yes
Fire Walls:	
Blast Walls:	
Deluge System:	Yes
Water Curtain:	
Enclosure:	
Neutralization:	
None:	
Other Mitigation System in Use:	

Monitoring/Detection Systems in Use

Process Area Detectors:	Yes
Perimeter Monitors:	Yes
None:	
Other Monitoring/Detection System in Use:	

Changes Since Last PHA Update

Reduction in Chemical Inventory:	
Increase in Chemical Inventory:	
Change Process Parameters:	Yes
Installation of Process Controls:	
Installation of Process Detection Systems:	
Installation of Perimeter Monitoring Systems:	
Installation of Mitigation Systems:	
None Recommended:	
None:	
Other Changes Since Last PHA or PHA Update:	

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):	31-Oct-2020

Training

Training Revision Date (The date of the most recent review or revision of training programs):	09-Jan-2020

The Type of Training Provided

Classroom:	Yes
On the Job:	Yes
Other Training:	Computer Based Training

The Type of Competency Testing Used

Written Tests:	Yes
Oral Tests:	Yes
Demonstration:	Yes
Observation:	
Other Type of Competency Testing Used:	

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures):	31-Oct-2020
Equipment Inspection Date (The date of the most recent equipment inspection or test):	02-Dec-2020
Equipment Tested (Equipment most recently inspected or tested):	D16-4

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures):	19-Nov-2020
Change Management Revision Date (The date of the most recent review or revision of management of change procedures):	10-Oct-2019

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review):	07-Dec-2020

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit):	18-Mar-2019
Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit):	30-Jun-2022

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)):	09-Jun-2020
Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation):	28-Feb-2021

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans):	08-Jan-2019

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures):	02-Jul-2020

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures):	22-Oct-2019
Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance):	01-Nov-2020

Confidential Business Information

CBI Claimed:	

Description

Alc Sasol Chemicals USA LLC has a long standing commitment to worker and public safety. This commitment is demonstrated by the resources invested in accident prevention, training of qualified personnel, and considering safety in the design, installation, operation and maintenance of our process. Our process includes seven (7) interconnecting units: Alcohol, Normal Paraffin, Ethylene, CoMonomers, Linear Alky Benzene, Ethoxylation, Ethylene Oxide Unit and a Chemical Warehouse. All elements within the prevention program apply to each unit. Each unit is equipped with active mitigation within the prevention program apply to each unit. Each unit is equipped with active mitigation designed to assure a safe work place for our employees and surrounding neighbors. A more detailed description of our Prevention Program can be found in the executive summary

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000121594
Chemical Name:	Ethylene [Ethene]
Flammable/Toxic:	Flammable
CAS Number:	74-85-1
Process ID:	1000114033
Description:	Alcohol Units
Prevention Program Level 3 ID:	1000097456
NAICS Code:	32511
Prevention Program Chemical ID:	1000121595
Chemical Name:	Pentane
Flammable/Toxic:	Flammable
CAS Number:	109-66-0
Process ID:	1000114033
Description:	Alcohol Units
Prevention Program Level 3 ID:	1000097456
NAICS Code:	32511

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	08-Dec-2020

Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	01-Oct-2019

The Technique Used

What If:	
Checklist:	
What If/Checklist:	Yes
HAZOP:	
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	
Other Technique Used:	

PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	30-Sep-2021

Major Hazards Identified

Toxic Release:	Yes
Fire:	Yes
Explosion:	Yes
Runaway Reaction:	Yes
Polymerization:	
Overpressurization:	Yes
Corrosion:	Yes
Overfilling:	Yes
Contamination:	Yes
Equipment Failure:	Yes
Loss of Cooling, Heating, Electricity, Instrument Air:	Yes
Earthquake:	
Floods (Flood Plain):	
Tornado:	Yes
Hurricanes:	Yes
Other Major Hazard Identified:	

Process Controls in Use

Vents:	Yes
Relief Valves:	Yes
Check Valves:	Yes
Scrubbers:	
Flares:	Yes
Manual Shutoffs:	Yes
Automatic Shutoffs:	Yes
Interlocks:	Yes
Alarms and Procedures:	Yes
Keyed Bypass:	
Emergency Air Supply:	Yes
Emergency Power:	Yes
Backup Pump:	Yes
Grounding Equipment:	Yes
Inhibitor Addition:	Yes
Rupture Disks:	Yes
Excess Flow Device:	Yes
Quench System:	
Purge System:	Yes
None:	
Other Process Control in Use:	

Mitigation Systems in Use

Sprinkler System:	Yes
Dikes:	Yes
Fire Walls:	Yes
Blast Walls:	Yes
Deluge System:	Yes
Water Curtain:	
Enclosure:	

Neutralization:
None:
Other Mitigation System in Use:

Monitoring/Detection Systems in Use

Process Area Detectors:	Yes
Perimeter Monitors:	Yes
None:	
Other Monitoring/Detection System in Use:	

Changes Since Last PHA Update

Reduction in Chemical Inventory:	
Increase in Chemical Inventory:	
Change Process Parameters:	Yes
Installation of Process Controls:	
Installation of Process Detection Systems:	
Installation of Perimeter Monitoring Systems:	
Installation of Mitigation Systems:	
None Recommended:	
None:	
Other Changes Since Last PHA or PHA Update:	

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):	10-Dec-2020

Training

Training Revision Date (The date of the most recent review or revision of training programs):	18-Mar-2020

The Type of Training Provided

Classroom:	Yes
On the Job:	Yes
Other Training:	Computer Based Training

The Type of Competency Testing Used

Written Tests:	Yes
Oral Tests:	Yes
Demonstration:	Yes
Observation:	Yes
Other Type of Competency Testing Used:	

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures):	05-May-2020

Equipment Inspection Date (The date of the most recent equipment inspection or test):	05-Nov-2020
Equipment Tested (Equipment most recently inspected or tested):	D6-658

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures):	02-Dec-2020
Change Management Revision Date (The date of the most recent review or revision of management of change procedures):	10-Oct-2019

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review):	04-Dec-2020

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit):	18-Mar-2019
Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit):	30-Jun-2022

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)):	04-Nov-2020
Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation):	30-Mar-2021

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans):	08-Jan-2019

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures):	02-Jul-2020

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures):	22-Oct-2019

Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance):	01-Nov-2020

Confidential Business Information

CBI Claimed:

Description

CoMon Sasol Chemicals USA LLC has a long standing commitment to worker and public safety. This commitment is demonstrated by the resources invested in accident prevention, training of qualified personnel, and considering safety in the design, installation, operation and maintenance of our process. Our process includes seven (7) interconnecting units: Alcohol, Normal Paraffin, Ethylene, CoMonomers, Linear Alky Benzene, Ethoxylation, Ethylene Oxide Unit and a Chemical Warehouse. All elements within the prevention program apply to each unit. Each unit is equipped with active mitigation within the prevention program apply to each unit. Each unit is equipped with active mitigation designed to assure a safe work place for our employees and surrounding neighbors. A more detailed description of our Prevention Program can be found in the executive summary.

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000121597
Chemical Name:	Ethylene [Ethene]
Flammable/Toxic:	Flammable
CAS Number:	74-85-1
Process ID:	1000114034
Description:	CoMonomers (012)
Prevention Program Level 3 ID:	1000097457
NAICS Code:	32511
Prevention Program Chemical ID:	1000121596
Chemical Name:	Propylene [1-Propene]
Flammable/Toxic:	Flammable
CAS Number:	115-07-1
Process ID:	1000114034
Description:	CoMonomers (012)
Prevention Program Level 3 ID:	1000097457
NAICS Code:	32511

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	04-Dec-2020

Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	09-Jan-2020

The Technique Used

What If:	
Checklist:	
What If/Checklist:	Yes
HAZOP:	
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	
Other Technique Used:	

PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	08-Jan-2022

Major Hazards Identified

Toxic Release:	
Fire:	
Explosion:	Yes
Runaway Reaction:	
Polymerization:	
Overpressurization:	Yes
Corrosion:	Yes
Overfilling:	Yes
Contamination:	Yes
Equipment Failure:	Yes
Loss of Cooling, Heating, Electricity, Instrument Air:	Yes
Earthquake:	
Floods (Flood Plain):	
Tornado:	
Hurricanes:	
Other Major Hazard Identified:	

Process Controls in Use

Vents:	
Relief Valves:	Yes
Check Valves:	Yes
Scrubbers:	
Flares:	Yes
Manual Shutoffs:	Yes
Automatic Shutoffs:	
Interlocks:	Yes
Alarms and Procedures:	Yes
Keyed Bypass:	
Emergency Air Supply:	
Emergency Power:	
Backup Pump:	Yes
Grounding Equipment:	Yes
Inhibitor Addition:	
Rupture Disks:	Yes
Excess Flow Device:	
Quench System:	
Purge System:	
None:	
Other Process Control in Use:	

Mitigation Systems in Use

Sprinkler System:	
Dikes:	Yes
Fire Walls:	
Blast Walls:	
Deluge System:	Yes
Water Curtain:	
Enclosure:	

Neutralization:
None:
Other Mitigation System in Use:

Monitoring/Detection Systems in Use

Process Area Detectors:	Yes
Perimeter Monitors:	
None:	
Other Monitoring/Detection System in Use:	

Changes Since Last PHA Update

Reduction in Chemical Inventory:	
Increase in Chemical Inventory:	
Change Process Parameters:	
Installation of Process Controls:	
Installation of Process Detection Systems:	
Installation of Perimeter Monitoring Systems:	
Installation of Mitigation Systems:	
None Recommended:	
None:	Yes
Other Changes Since Last PHA or PHA Update:	

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):	14-Oct-2020

Training

Training Revision Date (The date of the most recent review or revision of training programs):	28-Aug-2018

The Type of Training Provided

Classroom:	Yes
On the Job:	Yes
Other Training:	Computer Based Training

The Type of Competency Testing Used

Written Tests:	Yes
Oral Tests:	Yes
Demonstration:	Yes
Observation:	Yes
Other Type of Competency Testing Used:	

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures):	20-Nov-2020

Equipment Inspection Date (The date of the most recent equipment inspection or test):	16-Sep-2020
Equipment Tested (Equipment most recently inspected or tested):	V12-3015

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures):	04-Dec-2020
Change Management Revision Date (The date of the most recent review or revision of management of change procedures):	10-Oct-2019

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review):	24-Nov-2020

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit):	18-Mar-2019
Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit):	30-Jun-2022

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)):	07-Oct-2019
Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation):	03-Nov-2020

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans):	08-Jan-2019

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures):	02-Jul-2020

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures):	22-Oct-2019

Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance):	01-Nov-2020

Confidential Business Information

CBI Claimed:

Description

Chemical Warehouse Sasol Chemicals USA LLC has a long standing commitment to worker and public safety. This commitment is demonstrated by the resources invested in accident prevention, training of qualified personnel, and considering safety in the design, installation, operation and maintenance of our process. Our process includes seven (7) interconnecting units. Alcohol, Normal Paraffin, Ethylene, CoMonomers, Linear Alky Benzene, Ethoxylation, Ethylene Oxide Unit and a Chemicals Warehouse. All elements within the prevention program apply to each unit. Each unit is equipped with active mitigation within the prevention program apply to each unit. Each unit is equipped with active mitigation designed to assure a safe work place for our employees and surrounding neighbors. A more detailed description of our Prevention Program can be found in the executive summary.

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000121565
Chemical Name:	Dimethyldichlorosilane [Silane, dichlorodimethyl-]
Flammable/Toxic:	Toxic
CAS Number:	75-78-5
Process ID:	1000114025
Description:	Chemical Warehouse
Prevention Program Level 3 ID:	1000097459
NAICS Code:	49311

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	10-Aug-2018

Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	18-Mar-2019

The Technique Used

What If:	
Checklist:	
What If/Checklist:	
HAZOP:	Yes
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	
Other Technique Used:	
PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	17-Mar-2021

Major Hazards Identified

Toxic Release:	Yes
Fire:	Yes
Explosion:	
Runaway Reaction:	
Polymerization:	
Overpressurization:	

Corrosion:	
Overfilling:	
Contamination:	
Equipment Failure:	
Loss of Cooling, Heating, Electricity, Instrument Air:	
Earthquake:	
Floods (Flood Plain):	
Tornado:	
Hurricanes:	Yes
Other Major Hazard Identified:	

Process Controls in Use

Vents:	
Relief Valves:	
Check Valves:	
Scrubbers:	
Flares:	
Manual Shutoffs:	
Automatic Shutoffs:	
Interlocks:	
Alarms and Procedures:	Yes
Keyed Bypass:	
Emergency Air Supply:	
Emergency Power:	
Backup Pump:	
Grounding Equipment:	
Inhibitor Addition:	
Rupture Disks:	
Excess Flow Device:	
Quench System:	
Purge System:	
None:	
Other Process Control in Use:	

Mitigation Systems in Use

Sprinkler System:	Yes
Dikes:	Yes
Fire Walls:	
Blast Walls:	
Deluge System:	
Water Curtain:	
Enclosure:	
Neutralization:	
None:	
Other Mitigation System in Use:	

Monitoring/Detection Systems in Use

Process Area Detectors:	
Perimeter Monitors:	
None:	
Other Monitoring/Detection System in Use:	Smoke alarms

Changes Since Last PHA Update

Reduction in Chemical Inventory:	
Increase in Chemical Inventory:	
Change Process Parameters:	
Installation of Process Controls:	
Installation of Process Detection Systems:	
Installation of Perimeter Monitoring Systems:	
Installation of Mitigation Systems:	
None Recommended:	
None:	Yes
Other Changes Since Last PHA or PHA Update:	

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):	19-Aug-2020

Training

Training Revision Date (The date of the most recent review or revision of training programs):	11-Aug-2016

The Type of Training Provided

Classroom:	Yes
On the Job:	Yes
Other Training:	Computer Based Training

The Type of Competency Testing Used

Written Tests:	
Oral Tests:	
Demonstration:	Yes
Observation:	Yes
Other Type of Competency Testing Used:	

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures):	11-Dec-2020
Equipment Inspection Date (The date of the most recent equipment inspection or test):	01-Jul-2020
Equipment Tested (Equipment most recently inspected or tested):	Cylinder 575018

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures):	08-Dec-2020
Change Management Revision Date (The date of the most recent review or revision of management of change procedures):	10-Oct-2019

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review):	05-Oct-2020

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit):	18-Mar-2019
Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit):	30-Jun-2022

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)):	
Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation):	

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans):	22-Nov-2016

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures):	02-Jul-2020

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures):	22-Oct-2019
Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance):	01-Nov-2020

Confidential Business Information

CBI Claimed:	

Description

EO/EG Sasol Chemicals USA LLC has a long standing commitment to worker and public safety. This commitment is demonstrated by the resources invested in accident prevention, training of qualified personnel, and considering safety in the design, installation, operation and maintenance of our process. Our process includes seven (7) interconnecting units. Alcohol, Normal Paraffin, Ethylene, CoMonomers, Linear Alky Benzene, Ethylene Oxide Unit and a Chemical Warehouse. All elements within the prevention program apply to each unit. Each unit is equipped with active mitigation within the prevention program apply to each unit. Each unit is equipped with active mitigation designed to assure a safe work place for our employees and surrounding neighbors. A more detailed description of our Prevention Program can be found in the executive summary.

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000121576
Chemical Name:	Ethylene oxide [Oxirane]
Flammable/Toxic:	Toxic
CAS Number:	75-21-8
Process ID:	1000114027
Description:	Ethylene Oxide Unit 20
Prevention Program Level 3 ID:	1000097461
NAICS Code:	32511
Prevention Program Chemical ID:	1000121578
Chemical Name:	Methane
Flammable/Toxic:	Flammable
CAS Number:	74-82-8
Process ID:	1000114027
Description:	Ethylene Oxide Unit 20
Prevention Program Level 3 ID:	1000097461
NAICS Code:	32511
Prevention Program Chemical ID:	1000121575
Chemical Name:	Ethylene [Ethene]
Flammable/Toxic:	Flammable
CAS Number:	74-85-1
Process ID:	1000114027
Description:	Ethylene Oxide Unit 20
Prevention Program Level 3 ID:	1000097461
NAICS Code:	32511
Prevention Program Chemical ID:	1000121577
Chemical Name:	Propylene [1-Propene]
Flammable/Toxic:	Flammable
CAS Number:	115-07-1

Process ID:	1000114027
Description:	Ethylene Oxide Unit 20
Prevention Program Level 3 ID:	1000097461
NAICS Code:	32511

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	09-Nov-2020

Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	26-Oct-2016

The Technique Used

What If:	
Checklist:	
What If/Checklist:	
HAZOP:	Yes
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	
Other Technique Used:	
PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	26-Oct-2018

Major Hazards Identified

Toxic Release:	Yes
Fire:	Yes
Explosion:	Yes
Runaway Reaction:	
Polymerization:	Yes
Overpressurization:	Yes
Corrosion:	Yes
Overfilling:	Yes
Contamination:	Yes
Equipment Failure:	Yes
Loss of Cooling, Heating, Electricity, Instrument Air:	Yes
Earthquake:	
Floods (Flood Plain):	Yes
Tornado:	
Hurricanes:	Yes
Other Major Hazard Identified:	

Process Controls in Use

Vents:	Yes
Relief Valves:	Yes
Check Valves:	Yes
Scrubbers:	Yes
Flares:	Yes
Manual Shutoffs:	Yes

Automatic Shutoffs:	Yes
Interlocks:	Yes
Alarms and Procedures:	Yes
Keyed Bypass:	Yes
Emergency Air Supply:	Yes
Emergency Power:	Yes
Backup Pump:	Yes
Grounding Equipment:	Yes
Inhibitor Addition:	
Rupture Disks:	Yes
Excess Flow Device:	
Quench System:	
Purge System:	Yes
None:	
Other Process Control in Use:	

Mitigation Systems in Use

Sprinkler System:	Yes
Dikes:	Yes
Fire Walls:	Yes
Blast Walls:	Yes
Deluge System:	Yes
Water Curtain:	
Enclosure:	Yes
Neutralization:	
None:	
Other Mitigation System in Use:	Fire Proofing, EO Dillution basin

Monitoring/Detection Systems in Use

Process Area Detectors:	Yes
Perimeter Monitors:	
None:	
Other Monitoring/Detection System in Use:	EO Personal Monitors

Changes Since Last PHA Update

Reduction in Chemical Inventory:	
Increase in Chemical Inventory:	
Change Process Parameters:	
Installation of Process Controls:	
Installation of Process Detection Systems:	
Installation of Perimeter Monitoring Systems:	
Installation of Mitigation Systems:	
None Recommended:	
None:	Yes
Other Changes Since Last PHA or PHA Update:	

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):	09-Jul-2020

Training

Training Revision Date (The date of the most recent review or revision of training programs):	26-May-2020

The Type of Training Provided

Classroom:	Yes
On the Job:	Yes
Other Training:	

The Type of Competency Testing Used

Written Tests:	Yes
Oral Tests:	Yes
Demonstration:	Yes
Observation:	Yes
Other Type of Competency Testing Used:	

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures):	24-Feb-2020
Equipment Inspection Date (The date of the most recent equipment inspection or test):	24-Nov-2020
Equipment Tested (Equipment most recently inspected or tested):	PSV-02081023

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures):	03-Dec-2020
Change Management Revision Date (The date of the most recent review or revision of management of change procedures):	10-Oct-2019

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review):	01-Oct-2020

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit):	18-Mar-2019
Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit):	30-Jun-2022

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)):	17-Aug-2020
Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation):	31-Jan-2021

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans):	08-Jan-2019

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures):	02-Jul-2020

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures):	22-Oct-2019
Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance):	01-Nov-2020

Confidential Business Information

CBI Claimed:

Section 8. Program Level 2

No records found.

Section 9. Emergency Response

Written Emergency Response (ER) Plan

Community Plan (Is facility included in written community emergency response plan?):	Yes
Facility Plan (Does facility have its own written emergency response plan?):	Yes
Response Actions (Does ER plan include specific actions to be taken in response to accidental releases of regulated substance(s)?):	Yes
Public Information (Does ER plan include procedures for informing the public and local agencies responding to accidental release?):	Yes
Healthcare (Does facility's ER plan include information on emergency health care?):	Yes

Emergency Response Review

Review Date (Date of most recent review or update of facility's ER plan):	24-Mar-2020

Emergency Response Training

Training Date (Date of most recent review or update of facility's employees):	14-Jan-2021

Local Agency

Agency Name (Name of local agency with which the facility ER plan or response activities are coordinated):	Local Emergency Planning Commision
Agency Phone Number (Phone number of local agency with which the facility ER plan or response activities are coordinated):	(337) 437-3512

Subject to

OSHA Regulations at 29 CFR 1910.38:	Yes
OSHA Regulations at 29 CFR 1910.120:	Yes
Clean Water Regulations at 40 CFR 112:	Yes
RCRA Regulations at CFR 264, 265, and 279.52:	Yes
OPA 90 Regulations at 40 CFR 112, 33 CFR 154, 49 CFR 194, or 30 CFR 254:	Yes
State EPCRA Rules or Laws:	Yes
Other (Specify):	

Executive Summary

3271 LDEQ Facility ID Number
Sasol Chemicals USA, LLC. Lake Charles Chemical Complex
Risk Management Plan
Executive Summary

Sasol's Lake Charles Chemical Complex (LCCC) has a long-standing commitment to worker and public safety. This commitment is demonstrated by the resources invested in accident prevention, training of qualified personnel, and considering safety in the design, installation, operation and maintenance of our processes. Our policy is to implement reasonable controls to prevent chemical releases. However, if a release does occur, our trained personnel will respond to control, contain, and mitigate the release.

Sasol's Lake Charles Chemical Complex (LCCC) located in Westlake, Louisiana uses natural gas and by-products from refinery operations to produce specialty chemicals for detergents and cosmetics. The chemical complex uses or produces several regulated flammables such as ethylene, propane, butane, propylene, ethane, butane, hydrogen, methane, and pentane. Chemicals maintained on site at the LCCC listed on the EPA's list of toxic chemicals and are above EPA's threshold quantity are Chlorine, Ethylene Oxide, Dimethyldichlorosilane and Hydrogen Fluoride.

Process Safety Information

The LCCC (Lake Charles Chemical Complex) maintains a variety of technical documents that are used to help maintain safe operation of the processes. These documents address chemical properties and associated hazards, limits for key process parameters, specific chemical inventories, and equipment design basis/configuration information. Specific departments within the chemical complex are assigned responsibility for maintaining up-to-date process safety information. Employees are provided training on how to locate the information from various computer terminals located throughout the chemical complex.

Chemical specific information, including exposure hazards and emergency response/exposure considerations, is provided in safety data sheets (SDS). This information is supplemented by documents that address known corrosion concerns and known hazards associated within inadvertent mixing of specific chemicals. For the different process areas, the chemical complex has documented safety related limits for specific process parameters (e.g. temperature, pressure, composition, etc.). The chemical complex ensures that the processes are maintained within the limits using process controls, monitoring instruments, protective instrument systems, and highly trained personnel.

The chemical complex also maintains an electronic database, that is accessible by both employees and contractor supervision, which provides information about the design pressure and temperature ratings, electrical classification, etc. This information in combination with written procedures and trained personnel provides a basis for establishing inspection and maintenance activities as well as for evaluating proposed process and facility changes to ensure that safety features in the process are not compromised.

Process Hazard Analysis

The Lake Charles Chemical Complex (LCCC) has a comprehensive program to help ensure the hazards associated with the various processes are identified and controlled. Within this program, each process is systemically examined to identify hazards and ensure that adequate controls are in place to manage these hazards.

The LCCC primarily uses the hazard and operability (HAZOP) analysis technique to perform these evaluations and the What-if/Checklist method for Process Hazard Analysis revalidations. The analyses are conducted using a team of people who have operating and maintenance experience as well as engineering expertise. The team identifies and evaluates hazards of the process as well as accident prevention and mitigation measures, and makes suggestions for additional prevention and/or mitigation measures when the team believes such measures are necessary.

The PHA team findings are made available to people associated with the process unit for comments and forwarded to management for resolution. Implementation of mitigation options in response to PHA findings is based on a relative ranking assigned by the PHA team. This ranking helps ensure that potential accident scenarios assigned the highest rank receive immediate attention. All approved mitigation options being implemented in response to PHA findings are tracked until they are complete. The final resolution

of each finding is documented and retained.

Operating Procedures

Operators, supervisors, and plant engineers' work together to develop and maintain operating procedures. These procedures define how tasks related to process operations are safely performed. At the Lake Charles Chemical Complex (LCCC), operating procedures: (1) are used to train employees and (2) serve as reference guides for appropriate actions to take during both normal operations and process upsets. Operating procedures include:
¿Steps for safely conducting activities
¿Applicable process safety information, such as safe operating limits,
¿Safety and health considerations, such as chemical hazards, personnel protective equipment required and steps to take if exposed to a particular chemical.

Plant personnel develop and maintain operating procedures that cover all phases of operations, including initial startup, normal operation, normal shutdown, emergency shutdown, startup following a turnaround or emergency shutdown, and temporary operations.

Training

The Lake Charles Chemical Complex (LCCC) trains its workers to safely and effectively perform their assigned tasks. The training program includes both initial and refresher training.

All new employees assigned as operators receive comprehensive training before being assigned to a specific operating unit. This training includes training on specific types of equipment, such as pumps and compressors, general overview of the process, properties and hazard substances in the process, and detailed review of complex procedures, such as, safe work practices and of emergency response. Oral reviews and written tests are used to verify that employees understand the training material before a new employee can report to a process unit. Once a new employee reports to a particular process unit, he receives detailed training with respect to process specific procedures and for specific tasks, before he is allowed to begin work in a specific operating unit.

Refresher training covers (1) a general overview of the process, (2) the properties and hazards of the substances in the process and, (3) a review of the process operating procedures and safe work practices. Oral review and written tests are used to verify that employees understand the training before an employee can resume work in the process. The operators have been consulted in safety meetings and through questionnaires regarding effectiveness and frequency of training. Recommendations are reviewed and changes to the training program are implemented as appropriate.

Management of Change (MOC)

The Management of Change program for the LCCC evaluates and approves all proposed changes to chemicals, equipment, and procedures for covered processes to help ensure that a change does not negatively affect safe operations. Process changes that are determined to be a replacement in kind (e.g. replacing a valve with an identical valve) are allowed without completing a full management of change program. All other changes must be confirmed through a full management of change program to help ensure process safety information and procedures are updated, and affected employees are notified of the change.

Pre-Startup Safety Review (PSSR)

The Lake Charles Chemical Complex (LCCC) conducts a safety review of a new or modified process before the process is placed in service. The purpose of the PSSR is to ensure the safety features, procedures, personnel and equipment are appropriately prepared for startup prior to placing the equipment in service. The review provides one additional check to make sure construction of new processes and significant modifications to existing processes are in accordance with the design specifications and that all supporting systems is operationally ready. The PSSR review team uses checklists to verify all aspects of readiness. A PSSR involves field verification of the construction and serves a quality assurance function by requiring verification that accident prevention program requirements are properly implemented.

Mechanical Integrity

The Lake Charles Chemical Complex (LCCC) has well established practices and procedures to maintain pressure vessels, piping systems, relief and vent systems, controls, emergency shutdown systems, and rotating equipment (pumps and compressors) in a safe operating condition. The basic aspects of this program include (1) conducting training, (2) developing written procedures, (3) performing inspections and test, (4) correcting identified deficiencies and, (5) applying quality assurance measures. In combination, these activities form a system that maintains the mechanical integrity of the process.

Maintenance personnel receive training on (1) an overview of the process, (2) safety and health hazards, (3) applicable maintenance procedures, (4) emergency response plans, and (5) applicable safe work practices. Written procedures help ensure that work is performed in consistent manner and provides basis for training. Inspections and tests are performed to help ensure that equipment functions as intended, and to verify that equipment is within acceptable limits (e.g. adequate wall thickness for pressure vessels). If a deficiency is identified, the equipment will be repaired in a timely manner. All outstanding deficiencies are tracked until such time a final solution has been implemented and documented.

Another integral part of the mechanical integrity program is quality assurance. The LCCC incorporates quality assurance into equipment purchase and repairs. This helps ensure that new equipment is suitable for intended use and that proper materials and spare parts are used when repairs are made.

Safe Work Practices

The Lake Charles Chemical Complex (LCCC) has a long standing safe work program in place to ensure worker safety. Examples of the program include (1) control of the entry/presence/exit of support personnel, (2) lockout/tagout procedures to ensure isolation of energy sources for equipment undergoing maintenance, (3) procedures for safe removal of hazardous materials before process piping or equipment is opened, (4) a permit and procedures to conduct spark producing activities (i.e. hot work), and (5) a permit and procedures to ensure that adequate precautions are in place before entry into a confined space. These procedures, along with training of affected personnel, form a system to help ensure that operations and maintenance activities are performed safely.

Incident Investigation

The Lake Charles Chemical Complex (LCCC) investigates all incidents that could reasonably have resulted in a serious injury to personnel, the public, or the environment so similar incidents can be prevented. The LCCC trains employees to identify and report any incident requiring investigation. The investigation is initiated within 48 hours of the incident. Depending on the incident, an investigation team may be formed. Results of the investigation are documented and appropriate changes are made.

Employee Participation

The Lake Charles Chemical Complex (LCCC) maintains a written employee participation program to help ensure that safety and environmental concerns of the plant workers are addressed. The plant encourages active participation of personnel in safety, health, and environmental activities at the plant. Employees are consulted and/or informed about all aspects of the RMP prevention program including PHA's (Process Hazard Analysis) and operating procedures.

Compliance Audits

The Lake Charles Chemical Complex (LCCC) audits the covered processes to be certain that the prevention program is effectively addressing safety, health, and environmental issues. The complex assembles an audit team that includes personnel knowledgeable in the processes. This team evaluates whether the prevention program satisfies the requirements of the RMP rule and whether the prevention program is sufficient to ensure safe operation of the complex. The results of the audit are documented, recommendations are resolved, and appropriate enhancements made to the operations of the LCCC.

Contractors

The Lake Charles Chemical Complex (LCCC) has established a program to help ensure that contractor activities are performed in a safe manner. This program reviews the safety record of the contractors to ensure the plant only hires contractors who can safety perform the desired task. The complex communicates to the contractor supervisor the hazards of the process on which they and their employees will work, the plants safe work practices, and the plants emergency response procedures. The plant requires that the contractor supervisors train each of their employees on hazards and procedures specific to the complex site.

Five Year Accident History

The Lake Charles Chemical Complex (LCCC) has not had an accident in the past 5 years that exceeds the reporting threshold for the RMP program.

Emergency Response Program

The Lake Charles Chemical Complex (LCCC) emergency response program has been developed to meet the emergency planning, response, and notification requirements of the following regulations:

- ¿ OSHA 29 CFR 1910.38 (a)-Employee Emergency Action Plans
- ¿ OSHA 29 CFR 1910.120(q)-Hazardous Waste Operations and Emergency Response (HAZWOPER)
- ¿ OSHA 29 CFR 1910.119(n)-Process Safety Management of Highly Hazardous Chemicals
- ¿ OSHA 29 CFR 1910 Subpart L-Fire Protection
- ¿ LADEQ LAC 33.1§ 3901- Notification Regulations for Unauthorized Discharge
- ¿ LDPS Title 33, Part V, Subpart 2, Ch.101§ 1011-Release Reporting
- ¿ EPA 40 CFR Part 302.6-Notification Requirements
- ¿ EPA 40 CFR Part 355.40-Emergency Planning and Release Notification
- ¿ EPA 40 CFR Part 68- Risk Management Programs for Chemical Accidental Release Program
- ¿ EPA 40 CFR Part 355.30-Facility Coordinator and Emergency Response Plan
- ¿ EPA 40 CFR Part 112-Spill prevention, Control and Countermeasures Plan
- ¿ EPCRA 302-List of Extremely Hazardous Substances

The emergency response strategy for the Lake Charles Chemical Complex (LCCC) is to prevent and/or control emergency situations via the use of engineering, design, and fixed protection systems. The plant has an Emergency Response Team that is available 24 hours per day, and trained to respond and take actions to contain, control, and mitigate any release that might occur. The team has access to on-site emergency equipment which is appropriate for situations that could possibly occur at the LCCC including dedicated firewater supply/distribution, firefighting systems and appliances, and multiple pieces of apparatus for firefighting, medical, rescue, and hazardous material / spill response.
In addition to the considerable on-site resources, the LCCC is a member of the Southwest Louisiana Mutual Aid Association. This membership allows the LCCC (if needed) to draw on the emergency response resources of other industries and municipalities locally and regionally. Through both direct contact and via the mutual aid association, the LCCC coordinates with the Calcasieu Parish Office of Homeland Security and Emergency Response (OHSEP) who serves as the governmental liaison agency for the Parish LEPC.

Drills are conducted to assess the emergency response effort at the LCCC. These will be done on a regional basis to include multi-industry participation and on schedule to meet EPA deadlines.

Planned Changes to Improve Safety

The Lake Charles Chemical Complex (LCCC) constantly strives to improve safety and reduce risk through auditing, suggestions from employees, incident investigations, and the use of proper engineering standards, specifications and looking for user safer designs.

Title V Operating Permits
¿Ethoxylation Unit-2325-V8
¿Linear Alkyl Benzene Unit-2894-V5
¿Ethylene Unit-2743-V10

¿Steam Unit1-2901-V4
¿ASU Unit-2895-V4
¿Normal Paraffin Extract Unit-2896-V10
¿Alcohol Unit-2865-V12
¿Alumina Unit-2565-V10
¿CoMonomer (ECHO) Unit-3088-V3
¿ Utilities Infrastructure - 3170-V1
¿ EO\EG (020) - 3115-V2

Section 1. Registration Information

Source Identification

Facility Name:	Louisiana Integrated Polyethylene JV, LLC
Parent Company #1 Name:	Sasol Chemicals USA LLC
Parent Company #2 Name:	LyondellBasell LC Offtake LLC

Submission and Acceptance

Submission Type:	First-time submission
Subsequent RMP Submission Reason:	
Description:	
Receipt Date:	29-Jan-2021
Postmark Date:	29-Jan-2021
Next Due Date:	29-Jan-2026
Completeness Check Date:	29-Jan-2021
Complete RMP:	Yes
De-Registration / Closed Reason:	
De-Registration / Closed Reason Other Text:	
De-Registered / Closed Date:	
De-Registered / Closed Effective Date:	
Certification Received:	

Facility Identification

EPA Facility Identifier:	1000 0024 6049
Other EPA Systems Facility ID:	
Facility Registry System ID:	

Dun and Bradstreet Numbers (DUNS)

Facility DUNS:	
Parent Company #1 DUNS:	969557263
Parent Company #2 DUNS:	

Facility Location Address

Street 1:	2201 Old Spanish Trail
Street 2:	
City:	Westlake
State:	LOUISIANA
ZIP:	70669
ZIP4:	0727
County:	CALCASIEU

Facility Latitude and Longitude

Latitude (decimal):	30.258981
Longitude (decimal):	-93.290524
Lat/Long Method:	Interpolation - Photo
Lat/Long Description:	Other
Horizontal Accuracy Measure:	25
Horizontal Reference Datum Name:	North American Datum of 1983
Source Map Scale Number:	24000

Owner or Operator

Operator Name:	Equistar Chemicals, LP
Operator Phone:	(337) 842-0110

Mailing Address

Operator Street 1:	2201 Old Spanish Trail
Operator Street 2:	
Operator City:	Westlake
Operator State:	LOUISIANA
Operator ZIP:	70669
Operator ZIP4:	0727
Operator Foreign State or Province:	
Operator Foreign ZIP:	
Operator Foreign Country:	

Name and title of person or position responsible for Part 68 (RMP) Implementation

RMP Name of Person:	
RMP Title of Person or Position:	Process Safety Manager
RMP E-mail Address:	

Emergency Contact

Emergency Contact Name:	Scott Tyler
Emergency Contact Title:	Senior Manager Safety and Security
Emergency Contact Phone:	(337) 310-8409
Emergency Contact 24-Hour Phone:	(337) 310-7515
Emergency Contact Ext. or PIN:	
Emergency Contact E-mail Address:	scott.tyler@us.sasol.com

Other Points of Contact

Facility or Parent Company E-mail Address:	
Facility Public Contact Phone:	(337) 310-7515
Facility or Parent Company WWW Homepage Address:	www.lyondellbasell.com

Local Emergency Planning Committee

LEPC:	Calcasieu Parish LEPC

Full Time Equivalent Employees

Number of Full Time Employees (FTE) on Site:	384
FTE Claimed as CBI:	

Covered By

OSHA PSM :	Yes
EPCRA 302 :	Yes
CAA Title V:	Yes

Air Operating Permit ID:	226602

OSHA Ranking

OSHA Star or Merit Ranking:	

Last Safety Inspection

Last Safety Inspection (By an External Agency) Date:	18-Mar-2014
Last Safety Inspection Performed By an External Agency:	State environmental agency

Predictive Filing

Did this RMP involve predictive filing?:	

Preparer Information

Preparer Name:	Wouter de Waal
Preparer Phone:	(281) 588-3457
Preparer Street 1:	2201 Old Spanish Trail
Preparer Street 2:	
Preparer City:	Westlake
Preparer State:	LOUISIANA
Preparer ZIP:	70669
Preparer ZIP4:	0727
Preparer Foreign State:	
Preparer Foreign Country:	
Preparer Foreign ZIP:	

Confidential Business Information (CBI)

CBI Claimed:	
Substantiation Provided:	
Unsanitized RMP Provided:	

Reportable Accidents

Reportable Accidents:	See Section 6. Accident History below to determine if there were any accidentsreported for this RMP.

Process Chemicals

Process ID:	1000113790
Description:	Ethane Cracker Unit 50
Process Chemical ID:	1000142172
Program Level:	Program Level 3 process
Chemical Name:	1,3-Butadiene
CAS Number:	106-99-0
Quantity (lbs):	25842
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000113790
Description:	Ethane Cracker Unit 50
Process Chemical ID:	1000142173
Program Level:	Program Level 3 process
Chemical Name:	Propylene [1-Propene]
CAS Number:	115-07-1
Quantity (lbs):	503594
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000113790
Description:	Ethane Cracker Unit 50
Process Chemical ID:	1000142174
Program Level:	Program Level 3 process
Chemical Name:	Ethane
CAS Number:	74-84-0
Quantity (lbs):	1152180
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000113790
Description:	Ethane Cracker Unit 50
Process Chemical ID:	1000142175
Program Level:	Program Level 3 process
Chemical Name:	Ethylene [Ethene]
CAS Number:	74-85-1
Quantity (lbs):	1268098
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000113790
Description:	Ethane Cracker Unit 50
Process Chemical ID:	1000142176
Program Level:	Program Level 3 process
Chemical Name:	Methane
CAS Number:	74-82-8
Quantity (lbs):	108388
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000113790
Description:	Ethane Cracker Unit 50
Process Chemical ID:	1000142177
Program Level:	Program Level 3 process
Chemical Name:	Propane
CAS Number:	74-98-6
Quantity (lbs):	34487

CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000113790
Description:	Ethane Cracker Unit 50
Process Chemical ID:	1000142178
Program Level:	Program Level 3 process
Chemical Name:	Hydrogen
CAS Number:	1333-74-0
Quantity (lbs):	16710
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000113791
Description:	LDPE Unit 63
Process Chemical ID:	1000142179
Program Level:	Program Level 3 process
Chemical Name:	Ethylene [Ethene]
CAS Number:	74-85-1
Quantity (lbs):	72912
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000113791
Description:	LDPE Unit 63
Process Chemical ID:	1000142180
Program Level:	Program Level 3 process
Chemical Name:	Propylene [1-Propene]
CAS Number:	115-07-1
Quantity (lbs):	22748
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000113792
Description:	LLDPE Unit 60
Process Chemical ID:	1000142181
Program Level:	Program Level 3 process
Chemical Name:	Ethylene [Ethene]
CAS Number:	74-85-1
Quantity (lbs):	128968
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000113792
Description:	LLDPE Unit 60

Process Chemical ID:	1000142182
Program Level:	Program Level 3 process
Chemical Name:	Isopentane [Butane, 2-methyl-]
CAS Number:	78-78-4
Quantity (lbs):	68808
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000113793
Description:	UO&I storage
Process Chemical ID:	1000142183
Program Level:	Program Level 3 process
Chemical Name:	1-Pentene
CAS Number:	109-67-1
Quantity (lbs):	195600
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000113793
Description:	UO&I storage
Process Chemical ID:	1000142184
Program Level:	Program Level 3 process
Chemical Name:	Methane
CAS Number:	74-82-8
Quantity (lbs):	26706
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000113793
Description:	UO&I storage
Process Chemical ID:	1000142185
Program Level:	Program Level 3 process
Chemical Name:	2-Butene-trans [2-Butene, (E)]
CAS Number:	624-64-6
Quantity (lbs):	42165
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000113793
Description:	UO&I storage
Process Chemical ID:	1000142186
Program Level:	Program Level 3 process
Chemical Name:	Propyne [1-Propyne]
CAS Number:	74-99-7
Quantity (lbs):	28088
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000113793
Description:	UO&I storage
Process Chemical ID:	1000142187
Program Level:	Program Level 3 process
Chemical Name:	Propadiene [1,2-Propadiene]
CAS Number:	463-49-0
Quantity (lbs):	34217
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000113793
Description:	UO&I storage
Process Chemical ID:	1000142188
Program Level:	Program Level 3 process
Chemical Name:	1-Butene
CAS Number:	106-98-9
Quantity (lbs):	208101
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000113793
Description:	UO&I storage
Process Chemical ID:	1000142189
Program Level:	Program Level 3 process
Chemical Name:	2-Butene-cis
CAS Number:	590-18-1
Quantity (lbs):	29249
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000113793
Description:	UO&I storage
Process Chemical ID:	1000142190
Program Level:	Program Level 3 process
Chemical Name:	1,3-Pentadiene
CAS Number:	504-60-9
Quantity (lbs):	408014
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000113793
Description:	UO&I storage
Process Chemical ID:	1000142191
Program Level:	Program Level 3 process
Chemical Name:	Propylene [1-Propene]

CAS Number:	115-07-1
Quantity (lbs):	5209207
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000113793
Description:	UO&I storage
Process Chemical ID:	1000142192
Program Level:	Program Level 3 process
Chemical Name:	Propane
CAS Number:	74-98-6
Quantity (lbs):	1186796
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000113793
Description:	UO&I storage
Process Chemical ID:	1000142193
Program Level:	Program Level 3 process
Chemical Name:	Ethylene [Ethene]
CAS Number:	74-85-1
Quantity (lbs):	276941
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000113793
Description:	UO&I storage
Process Chemical ID:	1000142194
Program Level:	Program Level 3 process
Chemical Name:	Ethane
CAS Number:	74-84-0
Quantity (lbs):	331629
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000113793
Description:	UO&I storage
Process Chemical ID:	1000142195
Program Level:	Program Level 3 process
Chemical Name:	Isopentane [Butane, 2-methyl-]
CAS Number:	78-78-4
Quantity (lbs):	190922
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000113793
Description:	UO&I storage
Process Chemical ID:	1000142196
Program Level:	Program Level 3 process
Chemical Name:	1,3-Butadiene
CAS Number:	106-99-0
Quantity (lbs):	4675284
CBI Claimed:	
Flammable/Toxic:	Flammable

Process ID:	1000113793
Description:	UO&I storage
Process Chemical ID:	1000142197
Program Level:	Program Level 3 process
Chemical Name:	Butane
CAS Number:	106-97-8
Quantity (lbs):	897526
CBI Claimed:	
Flammable/Toxic:	Flammable

Process NAICS

Process ID:	1000113790
Process NAICS ID:	1000115183
Program Level:	Program Level 3 process
NAICS Code:	32511
NAICS Description:	Petrochemical Manufacturing

Process ID:	1000113791
Process NAICS ID:	1000115184
Program Level:	Program Level 3 process
NAICS Code:	32619
NAICS Description:	Other Plastics Product Manufacturing

Process ID:	1000113792
Process NAICS ID:	1000115188
Program Level:	Program Level 3 process
NAICS Code:	32619
NAICS Description:	Other Plastics Product Manufacturing

Process ID:	1000113793
Process NAICS ID:	1000115185
Program Level:	Program Level 3 process
NAICS Code:	32511
NAICS Description:	Petrochemical Manufacturing

Section 2. Toxics: Worst Case

No records found.

Section 3. Toxics: Alternative Release

No records found.

Section 4. Flammables: Worst Case

Flammable Worst ID: 1000069360

Model Used: EPA's RMP*Comp(TM)
Endpoint used: 1 PSI

Passive Mitigation Considered

Blast Walls:
Other Type:

Flammable Worst ID: 1000069361

Model Used: EPA's RMP*Comp(TM)
Endpoint used: 1 PSI

Passive Mitigation Considered

Blast Walls:
Other Type:

Flammable Worst ID: 1000069362

Model Used: EPA's RMP*Comp(TM)
Endpoint used: 1 PSI

Passive Mitigation Considered

Blast Walls:
Other Type:

Flammable Worst ID: 1000069381

Model Used: EPA's RMP*Comp(TM)
Endpoint used: 1 PSI

Passive Mitigation Considered

Blast Walls:
Other Type:

Flammable Worst ID: 1000069440

Model Used: EPA's RMP*Comp(TM)
Endpoint used: 1 PSI

Passive Mitigation Considered

Blast Walls:
Other Type:

Section 5. Flammables: Alternative Release

Flammable Alter ID: 1000064878

Model Used:	EPA's RMP*Comp(TM)

Passive Mitigation Considered

Dikes:	Yes
Fire Walls:	
Blast Walls:	
Enclosures:	
Other Type:	

Active Mitigation Considered

Sprinkler System:	
Deluge System:	Yes
Water Curtain:	
Excess Flow Valve:	
Other Type:	

Section 6. Accident History

Accident History ID: 1000070897

Date of Accident:	06-Jul-2019
Time Accident Began (HHMM):	1910
NAICS Code of Process Involved:	32511
NAICS Description:	Petrochemical Manufacturing
Release Duration:	000 Hours 01 Minutes

Release Event

Gas Release:	
Liquid Spill/Evaporation:	
Fire:	Yes
Explosion:	
Uncontrolled/Runaway Reaction:	

Release Source

Storage Vessel:	
Piping:	Yes
Process Vessel:	
Transfer Hose:	
Valve:	
Pump:	
Joint:	
Other Release Source:	

Weather Conditions at the Time of Event

Wind Speed:	1.5
Units:	miles/h
Direction:	S
Temperature:	90
Atmospheric Stability Class:	B
Precipitation Present:	
Unknown Weather Conditions:	

On-Site Impacts

Employee or Contractor Deaths:	0
Public Responder Deaths:	0
Public Deaths:	0
Employee or Contractor Injuries:	1
Public Responder Injuries:	0
Public Injuries:	0
On-Site Property Damage ($):	0

Known Off-Site Impacts

Deaths:	0
Hospitalization:	0
Other Medical Treatments:	0
Evacuated:	0

Sheltered-in-Place:	0
Off-Site Property Damage ($):	0

Environmental Damage

Fish or Animal Kills:	
Tree, Lawn, Shrub, or Crop Damage:	
Water Contamination:	
Soil Contamination:	
Other Environmental Damage:	

Initiating Event

Initiating Event:	Human Error

Contributing Factors

Equipment Failure:	
Human Error:	Yes
Improper Procedures:	
Overpressurization:	
Upset Condition:	
By-Pass Condition:	
Maintenance Activity/Inactivity:	
Process Design Failure:	Yes
Unsuitable Equipment:	
Unusual Weather Condition:	
Management Error:	
Other Contributing Factor:	

Off-Site Responders Notified

Off-Site Responders Notified:	Notified Only

Changes Introduced as a Result of the Accident

Improved or Upgraded Equipment:	
Revised Maintenance:	
Revised Training:	Yes
Revised Operating Procedures:	Yes
New Process Controls:	
New Mitigation Systems:	Yes
Revised Emergency Response Plan:	
Changed Process:	
Reduced Inventory:	
None:	
Other Changes Introduced:	

Confidential Business Information

CBI Claimed:	

Chemicals in Accident History

Accident Chemical ID:	1000057154
Quantity Released (lbs):	1
Percent Weight:	
Chemical Name:	Ethylene [Ethene]
CAS Number:	74-85-1
Flammable/Toxic:	Flammable

Accident History ID: 1000070898

Date of Accident:	13-Jan-2020
Time Accident Began (HHMM):	1323
NAICS Code of Process Involved:	32619
NAICS Description:	Other Plastics Product Manufacturing
Release Duration:	000 Hours 17 Minutes

Release Event

Gas Release:	Yes
Liquid Spill/Evaporation:	
Fire:	Yes
Explosion:	
Uncontrolled/Runaway Reaction:	

Release Source

Storage Vessel:	
Piping:	Yes
Process Vessel:	
Transfer Hose:	
Valve:	
Pump:	
Joint:	
Other Release Source:	

Weather Conditions at the Time of Event

Wind Speed:	
Units:	
Direction:	SW
Temperature:	75
Atmospheric Stability Class:	D
Precipitation Present:	
Unknown Weather Conditions:	

On-Site Impacts

Employee or Contractor Deaths:	0
Public Responder Deaths:	0
Public Deaths:	0
Employee or Contractor Injuries:	2
Public Responder Injuries:	0
Public Injuries:	0
On-Site Property Damage ($):	1000000

Known Off-Site Impacts

Deaths:	0
Hospitalization:	0
Other Medical Treatments:	0
Evacuated:	0
Sheltered-in-Place:	0
Off-Site Property Damage ($):	54000

Environmental Damage

Fish or Animal Kills:	
Tree, Lawn, Shrub, or Crop Damage:	
Water Contamination:	
Soil Contamination:	
Other Environmental Damage:	

Initiating Event

Initiating Event:	Equipment Failure

Contributing Factors

Equipment Failure:	Yes
Human Error:	
Improper Procedures:	
Overpressurization:	
Upset Condition:	
By-Pass Condition:	
Maintenance Activity/Inactivity:	
Process Design Failure:	Yes
Unsuitable Equipment:	
Unusual Weather Condition:	
Management Error:	
Other Contributing Factor:	

Off-Site Responders Notified

Off-Site Responders Notified:	Notified Only

Changes Introduced as a Result of the Accident

Improved or Upgraded Equipment:	Yes
Revised Maintenance:	
Revised Training:	
Revised Operating Procedures:	
New Process Controls:	
New Mitigation Systems:	
Revised Emergency Response Plan:	
Changed Process:	
Reduced Inventory:	
None:	
Other Changes Introduced:	

Confidential Business Information

CBI Claimed:

Chemicals in Accident History

Accident Chemical ID:	1000057155
Quantity Released (lbs):	12481
Percent Weight:	
Chemical Name:	Ethylene [Ethene]
CAS Number:	74-85-1
Flammable/Toxic:	Flammable

Section 7. Program Level 3

Description

ETH LyondellBasell has a commitment to worker and public safety. Safety is a core value of the company and this is demonstrated by the resources invested in accident prevention and training of qualified personnel, and considering safety in design, installation, operation and maintenance of our processes. LIP (Louisiana Integrated Polyethylene) consists of 3 Units and Utilities and infrastructure with interconnecting pipelines and storage. All elements within the prevention program apply to each unit. Each unit is equipped with active mitigation systems designed to assure the safety of the workers, equipment and surrounding neighbors. More detail of our prevention program can be found in the executive summary.

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000121280
Chemical Name:	Methane
Flammable/Toxic:	Flammable
CAS Number:	74-82-8
Process ID:	1000113790
Description:	Ethane Cracker Unit 50
Prevention Program Level 3 ID:	1000097218
NAICS Code:	32511
Prevention Program Chemical ID:	1000121278
Chemical Name:	Ethane
Flammable/Toxic:	Flammable
CAS Number:	74-84-0
Process ID:	1000113790
Description:	Ethane Cracker Unit 50
Prevention Program Level 3 ID:	1000097218
NAICS Code:	32511
Prevention Program Chemical ID:	1000121279
Chemical Name:	Ethylene [Ethene]
Flammable/Toxic:	Flammable
CAS Number:	74-85-1
Process ID:	1000113790
Description:	Ethane Cracker Unit 50
Prevention Program Level 3 ID:	1000097218
NAICS Code:	32511
Prevention Program Chemical ID:	1000121281
Chemical Name:	Propane
Flammable/Toxic:	Flammable
CAS Number:	74-98-6

Process ID:	1000113790
Description:	Ethane Cracker Unit 50
Prevention Program Level 3 ID:	1000097218
NAICS Code:	32511

Prevention Program Chemical ID:	1000121276
Chemical Name:	1,3-Butadiene
Flammable/Toxic:	Flammable
CAS Number:	106-99-0

Process ID:	1000113790
Description:	Ethane Cracker Unit 50
Prevention Program Level 3 ID:	1000097218
NAICS Code:	32511

Prevention Program Chemical ID:	1000121277
Chemical Name:	Propylene [1-Propene]
Flammable/Toxic:	Flammable
CAS Number:	115-07-1

Process ID:	1000113790
Description:	Ethane Cracker Unit 50
Prevention Program Level 3 ID:	1000097218
NAICS Code:	32511

Prevention Program Chemical ID:	1000121282
Chemical Name:	Hydrogen
Flammable/Toxic:	Flammable
CAS Number:	1333-74-0

Process ID:	1000113790
Description:	Ethane Cracker Unit 50
Prevention Program Level 3 ID:	1000097218
NAICS Code:	32511

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	10-Aug-2018

Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	13-May-2020

The Technique Used

What If:	
Checklist:	

What If/Checklist:	
HAZOP:	Yes
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	
Other Technique Used:	
PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	13-May-2022

Major Hazards Identified

Toxic Release:	Yes
Fire:	Yes
Explosion:	Yes
Runaway Reaction:	Yes
Polymerization:	Yes
Overpressurization:	Yes
Corrosion:	Yes
Overfilling:	Yes
Contamination:	Yes
Equipment Failure:	Yes
Loss of Cooling, Heating, Electricity, Instrument Air:	Yes
Earthquake:	Yes
Floods (Flood Plain):	Yes
Tornado:	Yes
Hurricanes:	Yes
Other Major Hazard Identified:	Brittle Fracture

Process Controls in Use

Vents:	Yes
Relief Valves:	Yes
Check Valves:	Yes
Scrubbers:	Yes
Flares:	Yes
Manual Shutoffs:	Yes
Automatic Shutoffs:	Yes
Interlocks:	Yes
Alarms and Procedures:	Yes
Keyed Bypass:	Yes
Emergency Air Supply:	Yes
Emergency Power:	Yes
Backup Pump:	Yes
Grounding Equipment:	Yes
Inhibitor Addition:	Yes
Rupture Disks:	Yes
Excess Flow Device:	Yes
Quench System:	Yes
Purge System:	Yes
None:	
Other Process Control in Use:	

Mitigation Systems in Use

Sprinkler System:	Yes
Dikes:	Yes

Fire Walls:	
Blast Walls:	Yes
Deluge System:	Yes
Water Curtain:	
Enclosure:	Yes
Neutralization:	Yes
None:	
Other Mitigation System in Use:	

Monitoring/Detection Systems in Use

Process Area Detectors:	Yes
Perimeter Monitors:	Yes
None:	
Other Monitoring/Detection System in Use:	

Changes Since Last PHA Update

Reduction in Chemical Inventory:	
Increase in Chemical Inventory:	
Change Process Parameters:	Yes
Installation of Process Controls:	Yes
Installation of Process Detection Systems:	Yes
Installation of Perimeter Monitoring Systems:	
Installation of Mitigation Systems:	Yes
None Recommended:	
None:	
Other Changes Since Last PHA or PHA Update:	

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):	30-Nov-2020

Training

Training Revision Date (The date of the most recent review or revision of training programs):	01-Oct-2017

The Type of Training Provided

Classroom:	Yes
On the Job:	Yes
Other Training:	Operator training simulator

The Type of Competency Testing Used

Written Tests:	Yes
Oral Tests:	Yes
Demonstration:	Yes
Observation:	Yes
Other Type of Competency Testing Used:	

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures):	10-Jul-2020
Equipment Inspection Date (The date of the most recent equipment inspection or test):	04-Dec-2020
Equipment Tested (Equipment most recently inspected or tested):	PSV-05042015A

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures):	18-Oct-2017
Change Management Revision Date (The date of the most recent review or revision of management of change procedures):	21-Jan-2019

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review):	04-Dec-2020

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit):	11-Jun-2019
Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit):	11-Jun-2022

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)):	01-Aug-2020
Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation):	26-Oct-2020

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans):	18-May-2020

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures):	22-May-2020

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures):	02-Jul-2020
Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance):	12-Aug-2019

Confidential Business Information

CBI Claimed:

Description

LDPE LyondellBasell has a commitment to worker and public safety. Safety is a core value of the company and this is demonstrated by the resources invested in accident prevention and training of qualified personnel, and considering safety in design, installation, operation and maintenance of our processes. LIP (Louisiana Integrated Polyethylene) consists of 3 Units and Utilities and infrastructure with interconnecting pipelines and storage. All elements within the prevention program apply to each unit. Each unit is equipped with active mitigation systems designed to assure the safety of the workers, equipment and surrounding neighbors. More detail of our prevention program can be found in the executive summary.

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000121289
Chemical Name:	Ethylene [Ethene]
Flammable/Toxic:	Flammable
CAS Number:	74-85-1
Process ID:	1000113791
Description:	LDPE Unit 63
Prevention Program Level 3 ID:	1000097259
NAICS Code:	32619
Prevention Program Chemical ID:	1000121290
Chemical Name:	Propylene [1-Propene]
Flammable/Toxic:	Flammable
CAS Number:	115-07-1
Process ID:	1000113791
Description:	LDPE Unit 63
Prevention Program Level 3 ID:	1000097259
NAICS Code:	32619

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	10-Aug-2018

Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	14-Sep-2016

The Technique Used

What If:	
Checklist:	
What If/Checklist:	Yes
HAZOP:	
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	
Other Technique Used:	

PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	18-Jun-2019

Major Hazards Identified

Toxic Release:	Yes
Fire:	Yes
Explosion:	Yes
Runaway Reaction:	
Polymerization:	Yes
Overpressurization:	Yes
Corrosion:	Yes
Overfilling:	Yes
Contamination:	Yes
Equipment Failure:	Yes
Loss of Cooling, Heating, Electricity, Instrument Air:	Yes
Earthquake:	
Floods (Flood Plain):	Yes
Tornado:	
Hurricanes:	
Other Major Hazard Identified:	

Process Controls in Use

Vents:	Yes
Relief Valves:	Yes
Check Valves:	Yes
Scrubbers:	
Flares:	Yes
Manual Shutoffs:	Yes
Automatic Shutoffs:	Yes
Interlocks:	Yes
Alarms and Procedures:	Yes
Keyed Bypass:	Yes
Emergency Air Supply:	Yes
Emergency Power:	Yes
Backup Pump:	Yes
Grounding Equipment:	Yes
Inhibitor Addition:	
Rupture Disks:	Yes
Excess Flow Device:	Yes
Quench System:	
Purge System:	Yes
None:	
Other Process Control in Use:	

Mitigation Systems in Use

Sprinkler System:	Yes
Dikes:	Yes
Fire Walls:	Yes
Blast Walls:	Yes
Deluge System:	Yes
Water Curtain:	
Enclosure:	Yes

Neutralization:	
None:	
Other Mitigation System in Use:	

Monitoring/Detection Systems in Use

Process Area Detectors:	Yes
Perimeter Monitors:	
None:	
Other Monitoring/Detection System in Use:	

Changes Since Last PHA Update

Reduction in Chemical Inventory:	
Increase in Chemical Inventory:	
Change Process Parameters:	
Installation of Process Controls:	
Installation of Process Detection Systems:	
Installation of Perimeter Monitoring Systems:	
Installation of Mitigation Systems:	
None Recommended:	
None:	Yes
Other Changes Since Last PHA or PHA Update:	

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):	25-Nov-2020

Training

Training Revision Date (The date of the most recent review or revision of training programs):	01-May-2018

The Type of Training Provided

Classroom:	Yes
On the Job:	Yes
Other Training:	Computer based training

The Type of Competency Testing Used

Written Tests:	Yes
Oral Tests:	Yes
Demonstration:	Yes
Observation:	Yes
Other Type of Competency Testing Used:	

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures):	10-Jul-2020

Equipment Inspection Date (The date of the most recent equipment inspection or test):	14-Oct-2020
Equipment Tested (Equipment most recently inspected or tested):	PSV-06315036B

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures):	01-Nov-2018
Change Management Revision Date (The date of the most recent review or revision of management of change procedures):	23-Jan-2019

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review):	01-Nov-2018

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit):	18-Mar-2019
Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit):	17-Mar-2020

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)):	06-Oct-2020
Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation):	16-Dec-2020

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans):	22-May-2020

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures):	02-Jul-2020

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures):	12-Aug-2019

Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance):	12-Dec-2017

Confidential Business Information

CBI Claimed:

Description

LLDPE LyondellBasell has a commitment to worker and public safety. Safety is a core value of the company and this is demonstrated by the resources invested in accident prevention and training of qualified personnel, and considering safety in design, installation, operation and maintenance of our processes. LIP (Louisiana Integrated Polyethylene) consists of 3 Units and Utilities and infrastructure with interconnecting pipelines and storage. All elements within the prevention program apply to each unit. Each unit is equipped with active mitigation systems designed to assure the safety of the workers, equipment and surrounding neighbors. More detail of our prevention program can be found in the executive summary.

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000121291
Chemical Name:	Ethylene [Ethene]
Flammable/Toxic:	Flammable
CAS Number:	74-85-1
Process ID:	1000113792
Description:	LLDPE Unit 60
Prevention Program Level 3 ID:	1000097260
NAICS Code:	32619
Prevention Program Chemical ID:	1000121292
Chemical Name:	Isopentane [Butane, 2-methyl-]
Flammable/Toxic:	Flammable
CAS Number:	78-78-4
Process ID:	1000113792
Description:	LLDPE Unit 60
Prevention Program Level 3 ID:	1000097260
NAICS Code:	32619

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	10-Aug-2018

Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	18-Mar-2019

The Technique Used

What If:	
Checklist:	
What If/Checklist:	
HAZOP:	Yes
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	
Other Technique Used:	

PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	17-Mar-2021

Major Hazards Identified

Toxic Release:	Yes
Fire:	Yes
Explosion:	Yes
Runaway Reaction:	
Polymerization:	
Overpressurization:	Yes
Corrosion:	
Overfilling:	Yes
Contamination:	Yes
Equipment Failure:	Yes
Loss of Cooling, Heating, Electricity, Instrument Air:	Yes
Earthquake:	
Floods (Flood Plain):	
Tornado:	
Hurricanes:	Yes
Other Major Hazard Identified:	

Process Controls in Use

Vents:	Yes
Relief Valves:	Yes
Check Valves:	Yes
Scrubbers:	
Flares:	Yes
Manual Shutoffs:	Yes
Automatic Shutoffs:	Yes
Interlocks:	Yes
Alarms and Procedures:	Yes
Keyed Bypass:	Yes
Emergency Air Supply:	Yes
Emergency Power:	Yes
Backup Pump:	Yes
Grounding Equipment:	Yes
Inhibitor Addition:	Yes
Rupture Disks:	Yes
Excess Flow Device:	Yes
Quench System:	Yes
Purge System:	Yes
None:	
Other Process Control in Use:	

Mitigation Systems in Use

Sprinkler System:	Yes
Dikes:	Yes
Fire Walls:	Yes
Blast Walls:	Yes
Deluge System:	
Water Curtain:	Yes
Enclosure:	Yes

Neutralization:
None:
Other Mitigation System in Use:

Monitoring/Detection Systems in Use

Process Area Detectors:	Yes
Perimeter Monitors:	Yes
None:	
Other Monitoring/Detection System in Use:	

Changes Since Last PHA Update

Reduction in Chemical Inventory:	
Increase in Chemical Inventory:	
Change Process Parameters:	
Installation of Process Controls:	
Installation of Process Detection Systems:	
Installation of Perimeter Monitoring Systems:	
Installation of Mitigation Systems:	
None Recommended:	
None:	Yes
Other Changes Since Last PHA or PHA Update:	

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):	19-Aug-2020

Training

Training Revision Date (The date of the most recent review or revision of training programs):	11-Aug-2016

The Type of Training Provided

Classroom:	Yes
On the Job:	Yes
Other Training:	Computer Based Training

The Type of Competency Testing Used

Written Tests:	Yes
Oral Tests:	Yes
Demonstration:	Yes
Observation:	Yes
Other Type of Competency Testing Used:	

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures):	10-Jul-2020

Equipment Inspection Date (The date of the most recent equipment inspection or test):	19-Mar-2020
Equipment Tested (Equipment most recently inspected or tested):	PSV-06040220

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures):	02-Feb-2019
Change Management Revision Date (The date of the most recent review or revision of management of change procedures):	23-Jan-2019

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review):	08-Dec-2020

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit):	18-Mar-2019
Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit):	30-Jun-2021

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)):	24-Aug-2020
Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation):	26-Oct-2020

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans):	22-May-2020

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures):	02-Jul-2020

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures):	12-Aug-2019

Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance):	12-Dec-2017

Confidential Business Information

CBI Claimed:

Description

UO&I LyondellBasell has a commitment to worker and public safety. Safety is a core value of the company and this is demonstrated by the resources invested in accident prevention and training of qualified personnel, and considering safety in design, installation, operation and maintenance of our processes. LIP (Louisiana Integrated Polyethylene) consists of 3 Units and Utilities and infrastructure with interconnecting pipelines and storage. All elements within the prevention program apply to each unit. Each unit is equipped with active mitigation systems designed to assure the safety of the workers, equipment and surrounding neighbors. More detail of our prevention program can be found in the executive summary.

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000121294
Chemical Name:	Methane
Flammable/Toxic:	Flammable
CAS Number:	74-82-8
Process ID:	1000113793
Description:	UO&I storage
Prevention Program Level 3 ID:	1000097261
NAICS Code:	32511
Prevention Program Chemical ID:	1000121304
Chemical Name:	Ethane
Flammable/Toxic:	Flammable
CAS Number:	74-84-0
Process ID:	1000113793
Description:	UO&I storage
Prevention Program Level 3 ID:	1000097261
NAICS Code:	32511
Prevention Program Chemical ID:	1000121303
Chemical Name:	Ethylene [Ethene]
Flammable/Toxic:	Flammable
CAS Number:	74-85-1
Process ID:	1000113793
Description:	UO&I storage
Prevention Program Level 3 ID:	1000097261
NAICS Code:	32511
Prevention Program Chemical ID:	1000121302
Chemical Name:	Propane
Flammable/Toxic:	Flammable
CAS Number:	74-98-6

Process ID:	1000113793
Description:	UO&I storage
Prevention Program Level 3 ID:	1000097261
NAICS Code:	32511

Prevention Program Chemical ID:	1000121296
Chemical Name:	Propyne [1-Propyne]
Flammable/Toxic:	Flammable
CAS Number:	74-99-7

Process ID:	1000113793
Description:	UO&I storage
Prevention Program Level 3 ID:	1000097261
NAICS Code:	32511

Prevention Program Chemical ID:	1000121305
Chemical Name:	Isopentane [Butane, 2-methyl-]
Flammable/Toxic:	Flammable
CAS Number:	78-78-4

Process ID:	1000113793
Description:	UO&I storage
Prevention Program Level 3 ID:	1000097261
NAICS Code:	32511

Prevention Program Chemical ID:	1000121307
Chemical Name:	Butane
Flammable/Toxic:	Flammable
CAS Number:	106-97-8

Process ID:	1000113793
Description:	UO&I storage
Prevention Program Level 3 ID:	1000097261
NAICS Code:	32511

Prevention Program Chemical ID:	1000121298
Chemical Name:	1-Butene
Flammable/Toxic:	Flammable
CAS Number:	106-98-9

Process ID:	1000113793
Description:	UO&I storage
Prevention Program Level 3 ID:	1000097261
NAICS Code:	32511

Prevention Program Chemical ID:	1000121306
Chemical Name:	1,3-Butadiene
Flammable/Toxic:	Flammable

CAS Number:	106-99-0
Process ID:	1000113793
Description:	UO&I storage
Prevention Program Level 3 ID:	1000097261
NAICS Code:	32511
Prevention Program Chemical ID:	1000121293
Chemical Name:	1-Pentene
Flammable/Toxic:	Flammable
CAS Number:	109-67-1
Process ID:	1000113793
Description:	UO&I storage
Prevention Program Level 3 ID:	1000097261
NAICS Code:	32511
Prevention Program Chemical ID:	1000121301
Chemical Name:	Propylene [1-Propene]
Flammable/Toxic:	Flammable
CAS Number:	115-07-1
Process ID:	1000113793
Description:	UO&I storage
Prevention Program Level 3 ID:	1000097261
NAICS Code:	32511
Prevention Program Chemical ID:	1000121297
Chemical Name:	Propadiene [1,2-Propadiene]
Flammable/Toxic:	Flammable
CAS Number:	463-49-0
Process ID:	1000113793
Description:	UO&I storage
Prevention Program Level 3 ID:	1000097261
NAICS Code:	32511
Prevention Program Chemical ID:	1000121300
Chemical Name:	1,3-Pentadiene
Flammable/Toxic:	Flammable
CAS Number:	504-60-9
Process ID:	1000113793
Description:	UO&I storage
Prevention Program Level 3 ID:	1000097261
NAICS Code:	32511

Prevention Program Chemical ID:	1000121299
Chemical Name:	2-Butene-cis
Flammable/Toxic:	Flammable
CAS Number:	590-18-1

Process ID:	1000113793
Description:	UO&I storage
Prevention Program Level 3 ID:	1000097261
NAICS Code:	32511

Prevention Program Chemical ID:	1000121295
Chemical Name:	2-Butene-trans [2-Butene, (E)]
Flammable/Toxic:	Flammable
CAS Number:	624-64-6

Process ID:	1000113793
Description:	UO&I storage
Prevention Program Level 3 ID:	1000097261
NAICS Code:	32511

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	10-Aug-2018

Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	29-Oct-2020

The Technique Used

What If:	
Checklist:	
What If/Checklist:	
HAZOP:	Yes
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	
Other Technique Used:	
PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	28-Oct-2022

Major Hazards Identified

Toxic Release:	
Fire:	Yes
Explosion:	
Runaway Reaction:	
Polymerization:	
Overpressurization:	Yes

Corrosion:	
Overfilling:	
Contamination:	
Equipment Failure:	Yes
Loss of Cooling, Heating, Electricity, Instrument Air:	Yes
Earthquake:	
Floods (Flood Plain):	
Tornado:	
Hurricanes:	Yes
Other Major Hazard Identified:	

Process Controls in Use

Vents:	Yes
Relief Valves:	Yes
Check Valves:	Yes
Scrubbers:	
Flares:	Yes
Manual Shutoffs:	Yes
Automatic Shutoffs:	Yes
Interlocks:	Yes
Alarms and Procedures:	Yes
Keyed Bypass:	
Emergency Air Supply:	
Emergency Power:	
Backup Pump:	Yes
Grounding Equipment:	Yes
Inhibitor Addition:	
Rupture Disks:	Yes
Excess Flow Device:	
Quench System:	
Purge System:	Yes
None:	
Other Process Control in Use:	

Mitigation Systems in Use

Sprinkler System:	
Dikes:	Yes
Fire Walls:	
Blast Walls:	
Deluge System:	
Water Curtain:	
Enclosure:	
Neutralization:	
None:	
Other Mitigation System in Use:	

Monitoring/Detection Systems in Use

Process Area Detectors:	Yes
Perimeter Monitors:	Yes
None:	
Other Monitoring/Detection System in Use:	

Changes Since Last PHA Update

Reduction in Chemical Inventory:	
Increase in Chemical Inventory:	
Change Process Parameters:	
Installation of Process Controls:	
Installation of Process Detection Systems:	
Installation of Perimeter Monitoring Systems:	
Installation of Mitigation Systems:	
None Recommended:	
None:	Yes
Other Changes Since Last PHA or PHA Update:	

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):	30-Nov-2020

Training

Training Revision Date (The date of the most recent review or revision of training programs):	01-May-2018

The Type of Training Provided

Classroom:	Yes
On the Job:	Yes
Other Training:	

The Type of Competency Testing Used

Written Tests:	Yes
Oral Tests:	Yes
Demonstration:	Yes
Observation:	Yes
Other Type of Competency Testing Used:	CBT

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures):	10-Jul-2020
Equipment Inspection Date (The date of the most recent equipment inspection or test):	30-May-2019
Equipment Tested (Equipment most recently inspected or tested):	PSV-07820031*

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures):	21-Jan-2019
Change Management Revision Date (The date of the most recent review or revision of management of change procedures):	21-Jan-2019

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review):	14-Feb-2019

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit):	18-Mar-2019
Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit):	30-Jun-2021

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)):	05-Aug-2020
Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation):	17-Nov-2020

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans):	18-May-2020

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures):	02-Jul-2020

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures):	12-Aug-2019
Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance):	12-Dec-2017

Confidential Business Information

CBI Claimed:	

Section 8. Program Level 2

No records found.

Section 9. Emergency Response

Written Emergency Response (ER) Plan

Community Plan (Is facility included in written community emergency response plan?):	Yes
Facility Plan (Does facility have its own written emergency response plan?):	Yes
Response Actions (Does ER plan include specific actions to be taken in response to accidental releases of regulated substance(s)?):	Yes
Public Information (Does ER plan include procedures for informing the public and local agencies responding to accidental release?):	Yes
Healthcare (Does facility's ER plan include information on emergency health care?):	Yes

Emergency Response Review

Review Date (Date of most recent review or update of facility's ER plan):	14-Dec-2017

Emergency Response Training

Training Date (Date of most recent review or update of facility's employees):	29-Oct-2019

Local Agency

Agency Name (Name of local agency with which the facility ER plan or response activities are coordinated):	Calcasieu Parish
Agency Phone Number (Phone number of local agency with which the facility ER plan or response activities are coordinated):	(337) 437-3512

Subject to

OSHA Regulations at 29 CFR 1910.38:	Yes
OSHA Regulations at 29 CFR 1910.120:	Yes
Clean Water Regulations at 40 CFR 112:	Yes
RCRA Regulations at CFR 264, 265, and 279.52:	Yes
OPA 90 Regulations at 40 CFR 112, 33 CFR 154, 49 CFR 194, or 30 CFR 254:	Yes
State EPCRA Rules or Laws:	
Other (Specify):	

Executive Summary

EQUISTAR Chemical, LP
Louisiana Integrated Polyethylene Joint Venture.
2201 Old Spanish Trail
Westlake, LA 70669

Risk Management Plan Executive Summary January 15, 2021

The reason for this submittal is the registration of a new facility operator by and newly formed joint venture between Sasol and LyondellBasell, the facility will be operated by Equistar Chemical, LP

LyondellBasell formed a Joint Venture (JV) with Sasol and will follow Sasol's safety standards and procedures during the transition period. The JV will be known as Louisiana Integrated Polyethylene, JV. The Ethane Cracker (C2 Cracker), LDPE, LLDPE and Utilities units were registered by the previous owner\operator under Sasol North America. These units will now be registered in this RMP as the Louisiana Integrated Polyethylene, JV. and operated by Equistar Chemicals, LP. All the chemicals were previously registered, and the only significant change is that there are no toxic chemicals above the threshold quantity (TQ) as specified in the United States Environmental Protection Agency's EPA's Risk Management Plan (RMP) rules and guidelines.

1.0 Accidental Release Prevention and Emergency Response Policies

The Louisiana Integrated Polyethylene Joint Venture is committed to operating and maintaining its processes to protect the employees, the public, and the environment. A combination of accidental release prevention programs and emergency response planning programs are used to manage the risk for all stakeholders. This document provides a brief overview of the comprehensive risk management activities used to prevent and mitigate the possibility of an accidental release of a regulated chemical.

It is our policy to implement appropriate controls to prevent the release of a regulated substance. However, if such a release does occur, our trained emergency response personnel are at hand to control and mitigate the effects of any release. The site emergency response personnel also coordinate with the Calcasieu Parish LEPC which provides additional emergency response expertise.

2.0 Stationary Source and Regulated Substances

The Louisiana Integrated Polyethylene, JV. uses or produces several regulated flammables such as ethylene, propane, butane, propylene, butane, hydrogen, methane, and pentane. In addition, Ethylene is polymerized, and an assortment of products are produced as polyethylene plastic pellets. The site has one Ethane Cracking unit and two Polyethylene Units- one Low Density Polyethylene (LDPE) and one Low Linear Polyethylene (LLDPE) manufacturing unit. These operating units utilize the following chemicals that have been identified by the EPA as having the potential to cause significant off-site consequences in the event of their substantial accidental release:

Toxics -

No toxic chemicals used inside the units are above the threshold quantity. Although the design was for Chlorine gas to be used, the line from supplier was blinded off and bleach is being used instead.

Dichlorodimethylsilane (DMDS) used in the LLDPE unit is below the threshold quantity and thus not reported.

Flammables -

1,3-Butadiene: Approximately 5 million pounds are stored in tanks and railcars as well as portions of mixtures within process equipment. It is sold as a finished product.

Ethylene: Approximately 1.67 million pounds are produced in the C2 Cracker. It is used internally to produce LDPE and LLDPE.

Ethane: Approximately 1.5 million pounds are stored and used on-site. It is used as feedstock for the units and pumped to a underground storage dome.

Propylene: Approximately 5.7 million pounds are stored and used on-site. It is used in the Olefin units as a compressed gas for refrigeration and reboilers.

Flammable Mixtures: Regulated substances in flammable mixtures are: 1,3-Butadiene, Butane, 1-Butene, cis- and trans-2-Butene, Ethane, Ethyl Acetylene, Ethylene, Hydrogen, Isobutane, Isobutylene, Methane, 2-Methyl-1-Butene, 3-Methyl-1-Butene, 1,3-Pentadinene, Pentane, 1-Pentene, 2-Pentene, Propadiene, Propane, Propylene, Propyne.

Our accidental release prevention programs and our contingency planning efforts help us effectively manage the hazards that are potentially posed to our employees, the public, and the environment by our use of these chemicals.

3.0 General Accident Release Prevention Program and Chemical-Specific Prevention Steps

LIP, JV has taken the necessary steps to comply with the accidental release prevention requirements set forth under the RMP regulations.. Additionally, this facility was designed and constructed in accordance with strict internal engineering standards and is subject to the requirements under the Occupational Health and Safety Administration's Process Safety Management (PSM) regulations.

Process Safety Information: Chemical hazard, process technology, and equipment information is documented, kept up-to-date, and made available to all workers.

Process Hazards Analyses (PHAs): A rigorous practice of reviewing new processes or changes to existing processes at the design stage is utilized, with the overall thought of identifying and mitigating health, safety and environmental issues before installation or operation. Scheduled PHAs are conducted every five years to revalidate previous hazard reviews and recommend corrective actions to prevent accidents.

Operating Procedures: Operating procedures provide detail on how to safely operate a process and are kept up-to-date constantly through a review during any operator training opportunity. They are also reviewed every five years. Operating procedures are based on process hazard / risk reviews and are periodically modified as a result of management of change activities or after completion of a process PHA. Operating procedures include safe start-up and emergency shutdown of a process unit.

Operator Training / Qualification Program: A training and testing program is in place to ensure that operators have the proper skills and knowledge prior to allowing them to independently operate a process. Operator re-qualification is required every three years at a minimum.

Maintenance Procedures: Specific procedures for maintaining process equipment are in place to ensure it operates safely. Plant and unit specific procedures for servicing operating equipment are in place, including preventive maintenance and reliability programs.

Maintenance Training: Mechanics and other craftsmen who perform routine or complex maintenance tasks are trained and tested on process equipment and inspections on operating equipment to ensure they have the required knowledge and skills.

Mechanical Integrity Program: Vessels (including shipping vessels) and other process equipment are periodically tested and inspected to ensure safe operations, following recognized standards and governmental requirements.

Quality Assurance: A system is in place to ensure that purchased equipment and materials meet established engineering standards and specifications.

Management of Change: The site has a management system to ensure that modifications to a process or facilities are evaluated to ensure continued safe operations. Pre-Startup Safety Reviews (PSSRs) are conducted for facility or process changes prior to implementation of the change.

Pre-Startup Safety Reviews (PSSRs): Reviews are conducted just prior to startup to ensure that modified facilities or processes are safe to operate.

Incident Investigation: The site ensures that accidents, incidents, and near misses are properly investigated to determine the root cause as well as contributing causes. In addition to the investigation, action items resulting from the investigation are communicated site-wide and tracked to completion to prevent recurrence.

Compliance Audits: Audits are conducted on a regular basis to verify the provisions set forth under the PSM and RMP rules are being implemented. These audits are conducted at a minimum of every three years by corporate and/or 3rd party auditors.

Employee Participation: The site has a written employee participation plan that defines how employees are consulted in the development and maintenance of the PSM/RMP elements. Employees participate in PHA's and they have access to the PHA's and other process safety information, the employees review operating procedures on a yearly basis to ensure updates and correctness of procedures.

Contractor Safety Program: The plant has a program to ensure that contractors are properly trained and uses this as a tool to provide the basic HSE training required of a contractor prior to entering a chemical manufacturing facility. All contractor workers must attend the Safety Council of South West Louisiana training and be certified through examination prior to arriving at the plant. In addition to basic training, Louisiana Integrated Polyethylene, JV. onsite specific training is required prior to entering the plant. The company has a rigorous process for pre-screening all contract companies to ensure they meet all company requirements.

4.0 Five Year Accident History

1. The facility had a small flash fire on July 6, 2019 during a normal operating procedure being executed during a routine sampling activity in the LLDPE Unit. One employee was injured during the flash fire and no off-site impact occurred.
2. The facility had an ethylene decomposition on January 132020 in the LDPE Unit that resulted in a fire during the start-up of the unit. The fire damaged equipment and two employees sustained minor first aid injuries when they tripped and fell while evacuating the area. No offsite impact occurred from this event.

No meetings on the incidents were held with the LEPC due to COVID-19 restriction from the LEPC office

5.0 Emergency Response

The site maintains an integrated contingency plan, which consolidates all the various federal, state, and local regulatory requirements for emergency response planning. This program provides the essential planning and training for effectively protecting workers, the public, and the environment during emergency situations. Furthermore, the site coordinates with the community response plan through the Calcasieu Parish LEPC. The site has a severe weather plan to prepare and recover from hurricanes, severe storms/tornadoes, and flooding.

6.0 Planned Changes to Improve Safety

The following is a list of improvements planned to be implemented at the facility to help prevent and/or better respond to accidental chemical releases:

¿Continued review and upgrade of safety interlock systems.
¿Revalidate all PHAs in accordance with requirements under RMP and PSM.
¿Evaluate and where necessary, update facility siting requirements for the site.
¿Revise the emergency response plan after critiques from recent drills.
¿Continue to utilize the tools of root cause analysis to investigate incidents and develop effective solutions to prevent recurrence.

FACT SHEET for SASOL CHEMICALS

On September 19, 2014, the Environmental Protection Agency (EPA), Region 6, filed a Consent Agreement and Final Order (CAFO) in the matter concerning Sasol North American, Inc., (Sasol), a petrochemical manufacturer with a facility in Westlake, Louisiana. In the CAFO, the EPA alleges that Sasol violated Section 112(r)(7) of the Clean Air Act (CAA), 42 U.S.C. § 7412(r)(7), and the regulatory Chemical Accident Prevention Provisions at 40 C.F.R. Part 68. Known as the Risk Management Program, Section 112(r)(7) and the implementing regulations are designed to prevent the accidental release of hazardous substances. The Program requires any person, including companies, that store, produce, process, or handle threshold amounts of these substances to implement a Risk Management Program that must include a hazard assessment, a prevention program, and an emergency response program.

The EPA alleged that Sasol violated Section 112(r)(7) of the CAA when it found deficiencies, during a July 21, 2010, Risk Management Program inspection. On May 10, 2013, EPA Region 6 received approval for a twelve-month waiver from the Department of Justice to initiate an administrative enforcement action against Sasol's prevention program, that included the following:

1. Standard operating procedures lacked several critical elements in violation of 40 C.F.R. § 68.73(a).

2. Deficiencies in the mechanical integrity program in violation of 40 C.F.R. § 68.73(a).

3. Failure to review the finding s of incident investigations with appropriate individuals in violation of 40 C.F.R. § 68.81. and,

4. Failure to accurately report the maximum intended inventory of all regulated substances in a process in violation of 40 C.F.R. § 68.160.

Each entity subject to the Risk Management Program regulations must also submit a Risk Management Plan (RMP) to the EPA describing its program. To resolve the above-mentioned violations, Sasol took corrective actions, certified that it was in compliance with Section 112(r) of the CAA and paid a civil penalty in the amount of $25,000 within 30 days of the CAFO being filed.

Message

From: Tates, Samuel [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=BB5C71F0659D41E99173246B1C8EEF95-TATES, SAMUEL]
Sent: 5/4/2022 7:07:51 PM
To: Haas, Craig [Haas.Craig@epa.gov]
Subject: FW: offsite or virtual compliance monitoring activities have resulted in enforcement actions

Craig
Additional information based on your request for enforcement from VPCE investigations.

Samuel Tates, Chief
Chemical Accident Enforcement Section (ECDAC)
Enforcement and Compliance Assurance Division
tates.samuel@epa.gov
(214) 665-2243 voice
(214) 665-7447 fax

From: Lundelius, Diana <Lundelius.Diana@epa.gov>
Sent: Wednesday, May 4, 2022 12:59 PM
To: Thompson, Steve <thompson.steve@epa.gov>; Tates, Samuel <Tates.Samuel@epa.gov>
Subject: RE: offsite or virtual compliance monitoring activities have resulted in enforcement actions

- House of Raeford Farms of Louisiana – VPCE conducted 8/11/2020 to 9/18/2020. Penalty CAFO issued 4/20/2022 $124,294. Fifteen violation counts for off site consequence analysis (OCA) deficiencies, process hazard analysis (PHA), operator training, mechanical integrity (MI), management of change (MOC), pre-start up safety review (PSSR), compliance audits, hot work permits, emergency response program, corrections/updates to the RMP registration, and recordkeeping to support the RMP program. Facility is in an EJ area with 10 indices >80%.

- Williams Partners Operating LLC/Larose Cryogenic Plant - VPCE conducted August 18 - 31, 2020. Penalty CAFO issued 7/20/2021 $105,302. Eight violation counts for process hazard analysis (PHA), operating procedures, mechanical integrity (MI), management of change (MOC) and training. Not EJ.

- Venice Condensate Stabilization (Enbridge Offshore Facilities, LLC) - VPCE conducted July 8, 2020 thru August 6, 2020. Penalty CAFO issued 11/16/2021 $58,125. Four violation counts for management plan/organization deficiencies, process hazard analysis (PHA), operating procedures and training. Not EJ.

- Targa Resources Corporation/Gillis Gas Plant - VPCE conducted April 14, 2021, to May 11, 2021. Penalty CAFO issued 3/24/2022 $50,220. Two violation counts for mechanical integrity (MI), emergency response program. Facility is in an EJ area with 10 indices >80%.

- Amarillo Rattler LLC/Yellow Rose Gas Plant – VPCE conducted February 23, 2021 thru March 9, 2021. RMP ESA issued 6/14/2021 $800. One violation count for failure to update the RMP registration with emergency contact information changes. Not EJ.

- Summit Midstream Partner LLC/Summit Midstream Lane Processing Facility – VPCE conducted November 5- 19, 2020. RMP ESA issued 4/29/2021 $1,760. Two violation counts for operating procedures, failure to update the RMP registration with emergency contact information changes. Not EJ.

- Kinder Morgan/Scissortail Energy/Paden Gas Plant - VPCE conducted January 21 - February 4, 2021. RMP ESA issued 9/07/2021 $9000. One violation count for mechanical integrity, failure to conduct inspections. Not EJ.

- Sendero Carlsbad Midstream, LLC - VPCE conducted September 15, 2020 - November 3, 2020. Penalty CAFO issued 4/4/2022 $124,283. Seven violation counts for process safety information (PSI) deficiencies, process hazard analysis (PHA), mechanical integrity (MI), management of change (MOC), hot work permits, emergency response program. Not EJ.

Pending actions:

- Black Bear Midstream/North Louisiana Gas Plant - VPCE conducted October 27, 2020 – January 14, 2021. NOPVOC issued 4/11/2022. Twenty four violation counts for management plan deficiencies, process safety information (PSI) deficiencies, process hazard analysis (PHA), operating procedures, training, mechanical integrity (MI), compliance audits, employee participation, contractors. DOJ waiver request submitted 3/24/2022, for time >12 months and penalty exceeding statutory maximum $414,364 on a proposed administrative penalty order with injunctive relief. Not EJ.

- Sasol Chemical USA – VPCE conducted January 26, 2021 – July 19, 2021. NOPVOC issued 1/24/2022 Fifteen violation counts for process hazard analysis (PHA), mechanical integrity (MI), management of change (MOC), compliance audits, incident investigation, operating procedures. DOJ waiver request pending for time >12 months and penalty exceeding statutory maximum $414,364 on a proposed administrative penalty order with injunctive relief. The facility is in the J2J corridor but not in an EJ block group.

- Koch Fertilizer Holding Company, LLC/Koch Fertilizer Enid, LLC - VPCE conducted 09/15/2020 – 09/30/2020. NOPVOC issued 3/08/2021. Nine violation counts for process hazard analysis (PHA), mechanical integrity (MI), training, compliance audits, operating procedures. Proposed penalty CAFO and AOC with injunctive relief being negotiated with company.

- Baze Chemical Company - VPCE conducted February 25, 2021 – April 19, 2021. NOPVOC issued 12/02/2021. Fourteen violation counts for management plan/organization deficiencies, OCA deficiencies, process hazard analysis (PHA), management of change (MOC), training, compliance audits, operating procedures, contractors, emergency response. Proposed penalty CAFO and AOC with injunctive relief being negotiated with company.

- Kiolbassa Provision Company - VPCE conducted 03/16/2022 – 03/31/2022. Inspection reporting pending completion. NOPVOC to be issued. Six violation counts for process hazard analysis (PHA), mechanical integrity (MI), MOC/PSSR training, emergency response notification. Proposed penalty CAFO will be negotiated with company. The facility is in an EJ area with 10 indices >80%. The VPCE was a follow up CM activity subsequent to an ammonia release in June 2020 that resulted in a large fish kill in the San Pedro River near downtown San Antonio, and several employees who were treated for ammonia inhalation exposure. Facility is in an EJ area with 11 indices >80%.

From: Lundelius, Diana
Sent: Wednesday, May 4, 2022 8:55 AM
To: Thompson, Steve <thompson.steve@epa.gov>; Tates, Samuel <Tates.Samuel@epa.gov>
Subject: RE: offsite or virtual compliance monitoring activities have resulted in enforcement actions

Just so that I don't get TMI, please confirm you are interested in just the VPCEs that were done in lieu of in-person inspections, which resulted in enforcement actions, and not the incident cases. Diana

From: Thompson, Steve <thompson.steve@epa.gov>
Sent: Wednesday, May 4, 2022 8:50 AM
To: Lundelius, Diana <Lundelius.Diana@epa.gov>; Tates, Samuel <Tates.Samuel@epa.gov>
Subject: Re: offsite or virtual compliance monitoring activities have resulted in enforcement actions

Diana/Sam

Do you have a short summary of just those specific cases and violations that were the result of the offsite VPCE? I just need a short set of bullets on each case.

OECA is particularly interested in how the offsite evaluations can be used to evaluate the same information or documents that are reviewed onsite.
Thanks

Sent from my iPhone

> On May 3, 2022, at 12:48 PM, Lundelius, Diana <Lundelius.Diana@epa.gov> wrote:
>
> For R6 air enforcement Chemical Accident Enforcement Section :
> FY 2017-2022:
> 24 AOCs
> 39 CAFOs
> 5 Referrals/executed Consent Decrees
>
> Majority are from accident release investigation off site PCEs.
> The referrals started out as incident investigations that led to inspections.
> Non incident off site inspection VPCEs – FY2022-1 so far; FY2021-11; FY2020-4
>
> Pending - 5 CAFOs, 5 AOCs from incident investigation PCEs (3) and VPCE inspections (2), and 2 referrals.
>
> Here is a screen shot of the list of final actions:

6ENA.Mosaic Fertilizer.finalAOC.11.03.16.pdf
6ENA.DuPont La Porte.12.08.16 Refferal.pdf
6ENA.Pryor Chemical Company.finalAOC.01.09.17.pdf
6ENA.Freedman Foods.finalCAFO.01.12.17.pdf
6ENA.Americas Styrenics LLC.finalAOC.03.23.17.pdf
6ENA.City of Alexandria.finalAOC.05.23.17.pdf
6ENA.Formosa Plastics Corporation.07.05.17 Referral.pdf
6ENA.Air Liquide.09.19.17 Referral.pdf
6EN-A Blanchard Refining Co AOC 06-2018-3337.pdf
6ENA.Butterball.WebFinalCAFO.11.02.2018.pdf
6EN-A Butterball Jonesboro LLC AOC 11062018.pdf
ExxonMobil Beaumont SIGNED CD (FILED 05-06-2019).pdf
Williams Olefins Lodged Complaint.pdf
Westlake Chemical AOC 06-2019-3343.pdf
Safeway Tom Thumb Alliance CAFO-Filed_06-2019-3313.pdf
Safeway Tom Thumb Alliance AOC-Signed_06-2019-3314.pdf
WTG Referral FINAL Lit Report 09.26.19.pdf
Swift Beef RMP CAFO 01-28-2020.pdf
Trecora Chemical CAFO 06-2018-3330.pdf
Valero Refining AOC 06-2018-3326.pdf
Terra Nitrogen CAFO 06-2017-3337.pdf
6ENA.Hexion Inc.concurredAOC.07.25.17.pdf
6ENA.Pinnacle Foods Inc.concurredCAFO.05.02.17.pdf
6ENA.Westlake Chemical OpCo.finalAOC.08.11.17.pdf
AnadarkoDelawareBasinMidstream.FinalCAFO.6.14.2018 06-2018-3311.pdf
Butterball AR CAFO 06-2017-3315.pdf
Butterball AR CAFO 06-2019-3302.pdf
Butterball AR AOC 11-07-2019-151204.pdf
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Chevron Phillips Port Arthur RMP CAFO 06-2020-3321.pdf
Honeywell Geismar CAFO FY2020- Filed and signed.pdf
Honeywell Geismar AOC FY2020 - Fully Signed.pdf
Air Products CAFO - Filed and Signed.pdf
Air Products Executed AOC - Final - Approvedcs - Certificate Signed.pdf
Total AOC - Fully effective and signed.pdf
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DPC Industries-RMP CAFO_06-2022-3324_3-17-22.pdf
Streamline Polymers CAFO 06-2022-3337_4-28-22pdf.pdf

Let me know if you need more info.
Diana

From: Haas, Craig <Haas.Craig@epa.gov>
Sent: Tuesday, May 3, 2022 7:50 AM
Subject: Thursday's 112(r)/EPCRA/CERCLA call

Our monthly call is this Thursday, and this month I have a homework assignment for you. We would like to get a feel for how many of your offsite or virtual compliance monitoring activities have resulted in enforcement actions. Senior management is interested in this topic across all programs, and based on our previous conversations I believe the hit rate for 112(r)/EPCRA/CERCLA is pretty high.

Please also send me other topics you would like to see on the agenda.

Thanks,

Craig

Message

From: Seager, Cheryl [Seager.Cheryl@epa.gov]
Sent: 1/24/2022 10:55:00 PM
To: Welton, Patricia [Welton.Patricia@epa.gov]; Thompson, Steve [thompson.steve@epa.gov]; Barnett, Cheryl [Barnett.Cheryl@epa.gov]
Subject: can you review?
Attachments: case details.docx

Cecil wanted both the short blurbs that we sent earlier, that could be used as language for the press release, and longer one-pagers that would be used internally for background. Can you review and edit? I'm hoping I didn't mix up cases, but really need another set of eyes.

Cheryl Seager | Director | Enforcement and Compliance Assurance Division | EPA Region 6| Mail Code 6ECAD| 1201 Elm Street| Suite 500 | Dallas, TX 75270 | Phone 214-665-3114 | Cell 972-971-9175